The Builder.

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In the Trocadéro Galleries.

WE have before remarked in passing that the collection in the West Gallery or quadrant of the Trocadéro, little talked of and much neglected by visitors, is in reality one of the most interesting sections of the Paris Exhibition. The whole range of these two galleries, the east and west quadrant of the Trocadéro, is indeed, to those interested in architecture and the arts necessary to it, well worth a leisurely visit, containing matter of much higher interest than the majority of the Champ de Mars pavilions can show.

The west wing of the Trocadéro contains the valuable loan collection of objects of French mediæval and Renaissance art, constituting the "Exposition Retrospectif" of French art. This retrospective idea has been carried out in a double sense in the Exhibition; there is the retrospective exhibition of painting for the last hundred years, collected in part of the upper galleries of the Palais des Beaux Arts; and there is this retrospective exhibition in the Trocadéro, which goes back to early days of French history, and consists of miscellaneous examples of artistic work. This is a temporary collection for the period of the great Exhibition only. The east gallery contains the permanent collection of casts of architectural detail, and of sculpture mostly architectural in its position or relation; this can be seen at any time, but as we doubt whether many visitors to Paris have seen it, or have any idea of the value and interest of the collection, it is worth while to bestow a few words on it here.

It is probably intended that both galleries of the building should eventually be occupied by a permanent architectural exhibition, as both have been treated in the same way, being divided into bays at intervals by large built-up casts of ancient portals, Gothic and Renaissance, stretching across the gallery and leaving passage-way through the centre. These seem to have been erected before the general chronological arrangement of the museum was planned, as they do not go systematically with the chronological arrangement of the minor objects on the walls and about the floor of each room. The east end of the east gallery is closed by a cast of the portal of the church of Ste. Marie des Dames Saintes at Charenton, about the twelfth century. The two walls of this compartment are occupied by a contrasted exhibition of Gothic and Classic detail: on the right, starting with one's back to the end wall and going westward, is a very fine collection of Gothic carving, capitals and scroll-work, including scrolls from some of the French transitional cathedrals which partake of the character of both schools; Gothic in force of design and boldness of execution, Classic in purity of line and in the details of the conventional leaves. A fine collection of photographs of Gothic carving supplements the casts. On the left wall are casts of detail chiefly Renaissance, the central feature being the *cheminée* from the château d'Ecouen, with a beautifully executed bas-relief figure in the centre panel, and detail which is an odd mixture of Classic and *rococo*, with a special treatment of the Greek key pattern with a delicately designed flower ornament winding through it. In the midst of these Renaissance details a cast of one mighty crocket from Troyes has been placed either by design or by happy accident; a mass of carved stone standing up nearly 3 ft. above the main line of the gable capping which it decorated, and looking as if giants had cut it out; compared with the Renaissance detail, it might be a bit of architecture from another planet.

The next compartment, guarded by casts of Dedier's "Diana" and Leconte's "Hercules," leads to a collection of casts of Versailles detail, a large space being occupied by the bas-reliefs from Girardon's fountain, which is the most refined work in a section the interest of which is not of the highest. The apartment includes, however, a cast from Puget's portal of the old Hôtel de Ville, a fine bold piece of work, with a projecting canopy carried by powerfully-designed Telamones with sad and agonised faces, and decorated with a grinning Satyr's head over the coat of arms in the centre. This is another of the examples which seems to combine Gothic force with Classic general form. A cast of Houdon's pretty nude "Diana" forms the centre object of the compartment, the exit from which is flanked by two of Magnier's very well-nourished reclining nymphs, between which we have access to a cast of the sixteenth-century tomb of St. Just at Narbonne, which is odd in another way, presenting in its surbase a Classical pilaster ornament of orthodox type, with small niches between filled with figures distinctly mediæval in feeling and disproportion, while the pilasters themselves are worked with a truly Gothic indifference to finish or perpendicularity. This strange mingling of Gothic and Classic types and feeling, in which late Mediæval and early Renaissance architecture in France abounds, is one of the things most prominently illustrated in this collocation of casts mostly from French work. We come next, for instance, on an extended piece of shrine work from Limoges Cathedral, which is an extraordinary mixture of detail: its general appearance at a casual glance is that of florid Gothic with large pendants and canopies which in general outline are completely Gothic in effect, but which are all made up of small Classic detail, the spirelets and pendants alike consisting of little circular shrines with classic colonnades, set one upon the other in diminishing stages; the intrados of the arches have a curious nondescript carved fringing hung on to them, in obvious imitation of foliated cusping. One of the portals of Beauvais, in this compartment, of course entirely Gothic in its architecture, exhibits in the doors somewhat the same peculiarity of Classic detail arranged so as to present a generally Mediæval aspect, appearing thus quite in harmony with its Mediæval masonic setting. One may surely get some lessons in design from this successful combination of what at first sight would seem incongruous elements.

The cast of the Tomb of the Duc de Brabant and Margaret de Foix, from the Cathedral of Nantes, which is in this compartment, affords a fine example of what might be termed the bedstead type of tomb of the Classic style, with the monumental effigies reclining on the top, and with allegorical figures mounting guard at the angles. These figures are of considerable interest; three of them apparently symbolise Temperance, Faith, and Justice: the fourth is rather a puzzle; it holds pincers in one hand and a cup in the other, perhaps intended as instruments of the Passion, but the head is double-faced, a female face looking outward, the back showing the face of an aged man. Although the whole details of the actual work are Classic, it is noticeable that the reliquary, or *ostensoir*, held in the hand of one of the angle figures, is pure Gothic, thus indicating that the idea of a relic of special sanctity was still connected with that of its original Mediæval shrine.

The Brézé tomb from Rouen is reproduced

here, reminding one, in spite of its generally sumptuous effect, how bad the detail is; a criticism which may be repeated with more emphasis in regard to some Della Robbia reproductions opposite. Robbia's figures and heads are fine, of course, but, in spite of the fuss made about his name, his decorative detail may be said to be about the worst that has ever been produced by an artist of genius; it is not decorative design at all, but a mere realisitic modelling of fruit and leaves stuck on in lumps, and rendered still worse, in the original examples, by coarse attempt at realistic colouring. It does not matter that the world has gone on admiring this kind of work for a good many generations; the world has been in the wrong; it is bad art.

The compartment closes with the portal of the Ducal palace of Nancy, again a piece of Gothic work with a quasi-Classic *fronton* as a termination, the two elements appearing to be contemporaneous. A more regular example of Gothic work is shown in the portal of transept of Bordeaux Cathedral, a cast which somehow irresistibly reminds one of Prout. A good deal of interesting Gothic sculpture is collected in this compartment, among others the extraordinary alto-relief of the "Last Judgment" from Bourges, though perhaps the finest object in the room is the cast of a great capital of a clustered pier from Rheims. The foliage is grand, as well as the way in which it is designed to form a suitable termination to the collection of shafts; the only criticism that could be passed on it (for even Mediæval work should not be blindly admired) is that the purely architectural character of the foliage is a little adulterated here and there by a *soupçon* of realism, which just mars what would otherwise be a perfect piece of work.

A good deal of illustration of Mediæval sculpture of the figure is continued in the next compartment, where however we find also a cast of one of the Erechtheion figures. Was it by design that this was placed in the same compartment with the figures from one of the piers of Strasburg? If so, or whether so or not, it is a happy and suggestive collocation. The general similarity in the style of treatment of the drapery on the Erechtheion and Strasburg figures is very remarkable, nor is the Mediæval example much inferior to the Greek one in refinement and effectiveness in the design of the drapery. It is a curious instance of how the same object, the desire to produce a piece of sculpture harmonising with and forming part of the architecture, could lead to such similar artistic results in places so widely separated ethnographically, geographically, and chronologically. After this the most interesting exhibit in the same room is the reproduction of a considerable portion of the plinth from Amiens Cathedral, with its curious panel carvings representing the signs of the zodiac as well as other symbols, and including, in one panel, a geometrical elevation of a castle in low relief, with doors and windows, and the grated window of a dungeon shewn beneath the ground line. The defect in this interesting piece of architectural reproduction is that the jointings of the stones are not indicated, a defect the more important as the portion modelled runs partially into the plinth of an obliquely placed buttress, and the method of making the angle between the buttress face and the main wall is a matter of some interest as a point in ancient building practice.

The last compartment of the permanent exhibition of casts is one of the most interesting of all in character, including several models from important buildings of the French Romanesque type. We enter the room under the narthex portal of Vezelay, with its twisted columns and curious corrupt Classic just turning to Gothic, and its mass of archaic figures in relief, in stiff sculpturesque drapery. There was an immediate recurrence in our mind to Branchidæ and other sites whence Greek archaic art had been turned up, on looking at this cast; and on turning round we catch sight of a cast of an archaic Athene from Ægina, with the same kind of stiff drapery scored with nearly parallel folds or flutings. This can hardly have been done indiscriminately or by chance, and the presence of this Athene cast is in itself an admirable bit of critical comment on artistic history. Then we have a reproduction of the strange gateway from Notre Dame at Clermont (Puy de Dôme), with its circular-headed *tympan* and odd suggestion or reminiscence of a Classic pediment under it with a pyramidal sculpture composition. Opposite this is the still circular-headed twelfth-century doorway from Chartres, with its twisted columns and extraordinary mingling of Byzantine and Classic reminiscences with Gothic feeling and execution in the carved work. The scroll work round the archivolt, and facing the spectator, is distinctly Byzantine in character; but look round the angle on to the door jamb, and what do we find there? The Greek fret, carved in a kind of perspective, exactly like a copy in relief of the favourite Roman mosaic border representing the Greek fret as if in high relief; and such in fact there can be little doubt it is. This is about as curious a little paragraph in the history of architectural ornament as could well be found.

This interesting room concludes the series of the permanent exhibition of architectural sculpture casts in the east quadrant of the Trocadéro. Though, as we have implied, it might be susceptible of more systematic arrangement, it is even as it stands a splendid collection of comparative illustration of architectural sculpture. We have nothing so good in England: South Kensington has a number of very fine reproductions of this class, but they are not so varied in style or so representative, nor by any means so numerous; and the Renaissance element greatly preponderates. The architectural museum of casts at Westminster is too exclusively Gothic, too poor and ineffective in arrangement, and too entirely deficient in examples of a larger type, such as whole portals and other features, to compare in the least with the Trocadéro collection, which is arranged in a fine gallery and kept in first-rate order, and when the space is clear in the west gallery, now occupied by the loan exhibition of which we are about to speak, there will be ample room to extend the collection further, the outlines for it being already marked out. France has started this architectural museum in thoroughly good style, and it is much to be wished that we could see anything done equal to it in London.

Passing round the semi-circular corridor skirting the exterior of the centre building, we come to the loan exhibition in the west quadrant. The first room at once gives indication of the value and interest of the collection. On the left, one of the first objects is a portion of a metal candelabrum foot from Rheims, of the twelfth century, with which Burges must have been familiar, and which is unsurpassable in its way in the boldness and grandeur of design and execution displayed in its scroll open work. A case on the same side is full of reliquaries, adorned with champlevé enamel, and croziers of various designs, many of them showing in the crook the sculpture of the defeat of the dragon, an apparently favourite subject, in which the dragon takes the form of a lizard, and suggests the idea of having been studied from one. A saucer-shaped bell from the museum of Melun is an item of some interest, as showing that form of bell as in use in the fifteenth century; it is dated 1498. On the right of the room are cases containing the same class of objects but with more of repoussé work and less enamel. The "Croix du Paraclet" from Amiens, of the eleventh century, is a splendid piece of work of its kind. It shows the figure of the Saviour engraved on the flat metal of the centre of the cross, which is completely lined up with precious stones, and the quatrefoils at the ends of the arms of the cross similarly ornamented. The "Croix de St. Robert" from the Dijon Museum is another splendid piece of work, the surface entirely fretted over with minute tracery in gold work; in the middle of the crook is fixed a star with a large ruby centre. The same kind of minute network of detail covers the reliquary cross from the Musée de la Seine Inférieure, which is powdered all over with jewels on the gold tracery work. A noteworthy feature in this part of the exhibition is the frequent recurrence of reliquaries in the form of a hand and arm, which seems to have been a favourite form at one period. In a case in the middle of the room is a well-preserved collection of arms and ornaments discovered on a skeleton found at Pouan in the Aube district about forty-five years ago, and attributed to the fifth century.

As in the other gallery, the compartments are divided off by reproductions of ancient buildings, and the first compartment here ends with that extraordinary piece of semi-barbarous architecture the portal of St. Pierre at Moissac, with foiled cusping up the jamb of each doorway, and a centre pillar formed of a series of griffins carved in bas-relief and interlacing. The heading of the doorway is an architrave covered with carved ornament confined within a series of circular saucer-shaped panels; while in the tympanum above is seen a wonderfully powerful piece of decorative sculpture representing the winged symbols of the Evangelists grouped round a central figure of Christ, so that the lines of the wings form a *vesica* shape. A more extraordinary and eccentric piece of work than the whole it would be difficult to find; barbarous enough in general appearance, no doubt; but the forgotten artist who sculptured that group in the tympanum was a genius, whoever he was, who might claim kinship with some of the greatest of the known sculptors of later times. Before passing beneath this remarkable portal, let us pause to notice a fine collection of ivory carving in a case in the centre of the floor, including a coffer from Lyons Cathedral, attributed to the ninth or tenth century, with small figures in the panels having a remarkable resemblance, in feeling and treatment, to archaic Greek work.

The second compartment contains some Mediæval ironwork, including a splendid wrought-iron grille of thirteenth-century date, with the scrolls welded into and apparently growing out of the centre piece, without signs of attachment by rivets or rings, as if a giant hand had peeled off and curled up the various sprays one by one from the centre stem. There is a certain amount of ivory carving again in this compartment, among which the ivory statuettes look, some of them, exceedingly German in type and style of execution. The prominent attractions of this second court, however, are the reliquaries or ostensoirs, of which a magnificent one is lent by M. Spitzer, a very valiant contributor to the Exhibition, and whose collection of Mediæval work, to judge from the examples of it here, must be pretty nearly unique. This is a large piece of gilt metal work with a spreading base, supporting on the stem a locked casket of some considerable size; over this is a glazed ostensoir of Gothic tabernacle work, and below the casket the stem branches each way to carry two other ostensoirs, one on each side of the casket. The centre stem below is further enriched with a tabernacle carrying little shrines all round it. This is one of the finest pieces of church furniture of the kind in existence, probably, not to be forgotten when once seen. The same collector lends two cases of fine Mediæval embroidery. From the Church of St. Trawig, Evreux, comes another splendid shrine of the thirteenth century, of another type; a long gabled coffer about 3 ft. in length, with a central flèche, and three gablets at each side adorned with bold metal gilt crestings; figure subjects are under each arch, and the decoration is picked out with enamel. The base, with a large cavetto moulding, is ornamented with beautifully delicate repoussé scroll-work. An interesting case of iron door furniture is exhibited, showing remarkable variety in the design of key handles. The designs of the wards of the keys, too, strike one as very intricate in comparison with the modern types of key which are supposed to be most invulnerable to unauthorised attacks.

At the end of this compartment is the re-

production of another extraordinary bit of early French architecture, the door of the abbey of Charlieu. The doorway is round-arched, and the nook shafts in the jambs, though occupying the common position of the Gothic upright shaft, are all tapered from bottom to top so that the top diameter is only half that of the bottom, and the shafts are divided off in their height by projecting rings making them look somewhat like drop spouts with wall-fastenings; the rings are enlivened with a cresting all round on the upper side. A more odd piece of detail it would be hard to find. The sculptured Greek fret is found again here, this time decorated with continuous surface ornaments of repeated circles or discs.

In the third room there is a very mixed collection of work, none of it without value, but oddly assorted. Specimens of Palissy ware are mixed with Mediæval work of a very different type: there is a beautiful silver processional cross from Quimper Cathedral, and a sixteenth-century processional cross from the church at Guingal, with decanter-stopper finials like those put in England to curtain rods; a decided and rather painful descent in taste from the Quimper cross. In the same room is a curious collection of French clocks lent by M. Leroux, some of them of peculiar design; in the form of vases or caskets, for instance, with the dial or figures belt-wise round the periphery, and a pointing hand travelling round to give the time. Needless to say that these fancies belong to the Renaissance period. A reliquary of Ste. Ursule from Rheims is curious, in the form of a ship, with virgins in costumes coloured with enamel standing on the deck—not "eleven thousand" of them, certainly; a smaller group had to suffice the artist. Among the other attractions of this third compartment is another display of keys, this time Renaissance, and also with very curious and varied devices in handles; more of M. Spitzer's embroideries; a good deal of Palissy and Limoges ware; a number of fine panels of Renaissance wood-carving, and a Renaissance carved wooden coffer lent by M. Chabrières; some fragments from the carved stalls at Gaillon and elsewhere, again showing the most curious mixture of Renaissance and Gothic work; some of these may be, and in fact appear to be, patchwork of different dates; but in one case there is a Renaissance pilaster decorated with the usual style of symmetrical scrolls and vases, and a Gothic gablet capping, all out of the same piece of stuff. In the middle of the floor in this compartment is a small case by no means to be passed over, of watches, lent by M. Paul Garnier. How these old French Renaissance watches behaved as time-keepers we have no means of knowing, but in design they are exquisite; more like jewels than watches; flowers of watches, in various graceful and unexpected shapes, and with the most delicate decoration. Nothing could give a more vivid idea of the exquisite and refined luxury, in regard to the adornments of life, which characterised the eighteenth century in France; and one asks on seeing them, why are all modern watches nothing but a dull uniform circular disk; why can we not have, along with improved mechanism, some of the grace and fancy which sported in the designs of these watches of the *perruque* period?

We pass into the next room under the portal of the church of St. Gilles: another piece of extraordinary architectural anomaly. Coupled Corinthian columns, almost pure Classic, resting on pedestals carved with Byzantine-looking animals in low flat relief; the surbase moulding with a Greek fret worked along the upper fillet in relief. The soffit of the enlablature is ornamented with coffers with a large rosette in the middle of each in the Roman manner, while along the lower part of the frieze odd Byzantine-looking animals crawl along within a few inches of the Roman rosettes; and below the architrave, between the projecting coupled columns, are niches with stiff flat-looking semi-Mediæval figures, divided from one another by clumsy fluted pilasters, just recalling the Classic pilaster. Certainly the incidents of transitional architecture are curiously illustrated in this series of architectural productions. A first glance at this, at a distance, would suggest the idea that it was a bit of Renaissance work; on the contrary, it is the Classic element preserved longer than usual, and reluctantly invaded by the Gothic.

In the next compartment we come into the region of later Renaissance and modern work, of better known and more ordinary types, including however some fine work in Sèvres and other ceramic productions, and a large exhibit of snuff-boxes, some of them showing beautiful examples of miniature painting. There are some interesting examples of snuff-boxes in decorative metal-work of considerable delicacy of design, and some silver work of good design. M. Spitzer is again benevolent in his loans of embroidery. The next compartment is reached under a reproduction of the arch of the Grosse Horloge at Rouen, with its Classic details of mouldings and ornament, and carving on the soffit of its elliptical arch which is Gothic in force and character. These give access to a fine collection of drawings of ancient buildings made for the Commission des Monuments Historiques; the apartment being terminated at the further end by a reproduction of the arcade from the Hôtel de Berny at Toulouse, with its curiously corrupt Classic detail and columns encrusted with ornament not in the best taste. In a case near this is some fine jewellery of the seventeenth and eighteenth centuries; much of the gold work here is worthy of high admiration, and in its thin texture and minute and delicate design recalls some of the qualities of Greek gold work; it is certainly far superior in artistic style to most of what the French have to show in this class of work at the present day.

We have omitted so far to notice that the upper portions of the walls of all the compartments in this gallery are hung with tapestries of various dates, many of them very fine. Those of the later dates, seventeenth century, are mostly Classic subjects of a very florid character. As we go back to the sixteenth century we find broader and fuller draperies and the compositions more broadly massed and more decorative in style. In the earlier sixteenth century work especially there is something of the flat decorative style and abundance of minute detail characteristic of Mediæval art, some of the special qualities of which seem to have survived in tapestry after the Mediæval spirit had become extinct in most other forms of work. Going back again to the first room we find two curiously contrasted tapestry exhibits. One of these is from the Parc aux Cerfs at Versailles, and is a highly conventional representation of a palisaded enclosure and trees, and animals scattered about: there is no attempt at perspective, and if this is of the date of the Parc aux Cerfs, it is a curiously naïve piece of work for its time. On the opposite wall, in startling contrast with this, are two tapestries from the Hospice de Chalais, representing the Prodigal Son, and "Les Bucherons," a group of woodcutters. These, the latter especially, are as realistic as the artist could make them, and in reality quite out of keeping with the true conditions of tapestry art; their precise date is not given.

The retrospective exhibition does not fill the whole of the western gallery, the end portion being devoted to the permanent collection of casts from Cambodian architecture and sculpture, which may be regarded as part of the general collection of comparative casts of architectural sculpture. The vestibule at the bottom of the end staircase, at the extreme western end of the gallery, is occupied by a cast of the end portion of the great sculptured balustrade, known to those who have studied the French discoveries and illustrations of Cambodian architecture; a balustrade on an immense scale which consists of an enormous serpent supported horizontally by a succession of kneeling figures considerably over life-size, and which turns up as a ramp at the end with a portentous and many-headed finial, as of serpent heads radiating round a centre. After looking at the Classic and Mediæval sculpture in the eastern gallery, it is strange to end one's walk with the sight of this monstrous and barbaric production, which seems as if it belonged to an earlier age of the earth's history altogether—yet, uncouth as this is, there is a wonderful power about it, which sends one into speculations as to the character and life and associations of the people who could have produced it. They were artists in their way; they could not model the figure, certainly, and the kneeling figures seem rather blocked out in the rough than carved; the thing is so weird, so completely out of touch with all our associations and tastes, that it looks as if it might have been one of the sculptural decorations of De Quincey's opium dreams. One feels, certainly, a kind of loathing of the people who could do such a thing; but there is far too much power of conception about it to pass it by indifferently, and it is certainly a most strange and bewildering addition to a museum of architectural sculpture.

NOTES.

THE case of Whitmore *v.* Crabb, Veley, & Co., tried in the *Nisi Prius* Court at the Essex Assizes, on the 29th ult., afforded another instance of the extraordinary misapprehensions under which learned Judges seem to lie as to the architectural profession. The plaintiff in the case was an architect who sued for professional charges, and got a verdict. On the statement of the plaintiff's counsel that "the charge of five per cent. on the actual outlay amounted to 33*l.*," the Lord Chief Justice is reported as having observed that he would not accept the dictum of the Royal Institute of British Architects in the matter of charges. This or that percentage could not be allowed as customary. "The principle he should go upon would be that of *quantum meruit*,—architects should be paid like other people." And how are "other people" paid? We have most of us heard of fixed and recognised charges in the legal profession. But the fact is that the Institute scale of charges is precisely an endeavour to define *quantum meruit* in a convenient manner for general working. The Institute does not endeavour to impose anything. It has merely stated an average fair charge as a means of avoiding dispute, and as a guide to architects and their clients as to what is reasonably fair to both sides. The Institute did not invent the percentage system of payment; they have only advised upon it. We think it a bad system; so do some of the profession; but it has become generally accepted by custom, and the fact is that in many cases it is in favour of the public and bears hardly on the architects; and many eminent architects, whose designs are much sought after, could make a great deal more by naming fees *ad libitum*. According to another report the Lord Chief Justice added that an eminent architect, whose name he would not mention, had claimed 5,000*l.* thirteen years after the plans had been prepared for a castle which had never been built. Lord Coleridge is probably not aware that when the plans and designs of a building have been prepared, half, according to a fair estimate, of the architect's work in connection with it is done. Is he to have no recompense for that because the client changes his mind and does not build? And apparently, in Lord Coleridge's mind, the fact that the unfortunate architect has been kept thirteen years out of his money is an aggravation of his offence in asking for it! If any member of the legal profession brought a claim for fees that had been owing to him for thirteen years, we should probably find that the delay in paying him would be adduced as an additional grievance. But according to Lord Coleridge, we presume, if an architect is kept out of his rightful earnings for thirteen years his claim ought to lapse. Then a

muddle-headed local newspaper says this is just as bad as the Institute's other attempt to impose professional referees on competition committees. As this wiseacre has already been told, the architects in their corporate capacity never made any such attempt; they simply said that, for reasons they thought sufficient, they would not compete except under certain conditions. This is surely a free country, even for architects. If people do not like those conditions, they need not have architectural competitions,—that is all. No one obliges them to put buildings up to competition.

WE are glad to see that the Master of the Rolls, on appeal, has declined to set aside Sir F. Bramwell's arbitration in the case of Messrs. Kirk & Randall and the East and West India Dock Company. It will be remembered that the contractors claimed a large extra payment beyond their contract, on account of the very different nature of the excavation from what they had been led to expect, the ground being soft and incapable of being retained at the prescribed slope (1½ to 1) without a great deal of expensive shoring. Sir F. Bramwell, who was called in as arbitrator, ruled that the work as it had to be executed did not come under the head of the character of work for which they contracted at the scheduled prices. The Master of the Rolls said that,—

"Whether certain work was within the schedule and addenda of prices seemed to him to be a question of facts, though it might perhaps turn upon the true construction of the schedule. In the schedule the work was described. The work was to be done in a soil described by the engineer. The arbitrator decided that the work was described to be done in a soil where sufficient ballast would be found for the concrete, and where the soil would stand at a slope of 1½ to 1. The arbitrator decided that that was the description of the work to be done for which prices were fixed in the schedule, and that work to be done in another kind of soil would be work of another description. That was a matter for a scientific man to decide. The arbitrator had, in effect, said that a statement made by an engineer to a contractor that the soil would stand at 1½ to 1 amounted to a description of the soil, and that if the soil would not stand at that slope it made the work of a different character, and the description in the schedule of prices did not apply. No price, therefore, being named in the schedule, the arbitrator had to fix it. For these reasons he was of opinion that there was nothing appearing upon the face of the award which showed error in point of law. Whether the arbitrator was right in his findings of fact it was not for them to say."

The case does not in our opinion reflect creditably on the East and West India Docks Co. They or their practical advisers must have known well enough that the contractor was doing extra work and was put to great extra cost beyond what he had estimated for; the work was done and the value of the money claimed had been given, and they endeavoured to withhold it from the contractors on a question of technical interpretation of words, and they endeavoured (unsuccessfully) to prohibit the arbitrator from admitting evidence as to the nature of the soil. The moral excuse, we presume, is that the managers of the Company were bound to save their shareholders' money by any means in their power. It might be said that the contractor should have acquainted himself with the nature of the soil; but the obvious retort is, that so should the Company's engineer who drew up the specification. The unquestionable fact remained that the unexpected nature of the soil led to difficulties and expense for which neither the Company nor the contractor were prepared, and the Company made use of technicalities to endeavour to throw the extra cost on the unfortunate contractors. That would be considered a very mean policy on the part of an individual; it is a thing no high-minded man would condescend to; and we are quite unable to see why there should be one code of honour for individuals and another for Companies.

THE first number of the second volume of the *Technology Architectural Review*, the illustrations in which consist mostly of ideal designs for types of buildings, contains two sets of designs for a Billiard Hall and Exedra; which latter word appears to be used for an open gallery or colonnade in connexion with the Hall. The plates are, like all the *Technology* illustrations, beautifully executed, but both the designers appear to have forgotten that top-light is an essential characteristic of a billiard-room where it can be obtained; and this should certainly have been remembered in an ideal design unhampered by considerations of site. The number includes a photograph from a finely-executed elevation of the Library of St. Mark, by Mr. S. W. Mead, labelled "Rotch Scholarship *envoi*." There is a kind of "École des Beaux-Arts" air about these American drawings, and the frank adoption of the word "envoi" seems to further indicate the original inspiration of the *Technology Review*. The number contains some good literary matter, about which we may have more to say.

IN the current number of *L'Architecture* M. Jourdain, replying once more to M. Dupuis, the upholder of "L'École" in architecture, and referring to the claim advanced by the latter that the Exhibition buildings were designed on the principles taught in the École des Beaux-Arts, asks rather pertinently if his opponent can tell him where are the traditions of "L'École" in the "Galerie des Machines," and what are the Classic formulæ of entablature, columns, pilasters &c. observed in that building, and where among the Five Orders M. Dutert found his curious capitals, and what affinity of any kind the structure in question has with the Greek and Roman temples and Italian Renaissance villas, the study of which forms the basis of the teaching of the École des Beaux-Arts? M. Dupuis will find that rather a difficult question to answer. M. Jourdain further avers that his object (though he regards this as a "véritable rêve de fumeur d'opium") is not to narrow but to extend the field of architectural studies at the École. He says:—

"Je voudrais qu'on fît aux élèves des cours sur l'architecture comparée du monde entier; qu'on allât fouiller le passé pour en chercher les chefs-d'œuvre; qu'on dressât une sorte de catalogue raisonné des manifestations artistiques vraiment grandes de l'humanité; qu'on tentât l'analyse et la synthèse de chaque style, sans parti pris, sans mesquin esprit de dénigrement; qu'on ouvrit les portes à toutes les tendances, à tout les essais, à toutes les évolutions; qu'on ne pressurât pas les cerveaux dans le même moule à gaufres; qu'il n'y eût ni élus ni damnés; qu'enfin on démolît la cage où,—comme récompense suprême,—on oblige de pauvres diables dont le casier judiciaire est vierge à relever pendant quatre ans des ruines romaines que tout le monde connaît et qui n'intéressent personne,—pas même les membres de l'Institut."

This programme seems very much in accord with that which M. César Daly demands under the title of "Hautes Études": studies directed to find a reasonable basis of architectural style in general, independent of the reproduction of special styles. In regard to practical education, M. Jourdain continues:—

"Ce serait plus simple. Je ne demanderais pas qu'on apprît aux étudiants la section réglementaire d'un ventilateur de fosse ni la façon dont fonctionne une lampe Siemens. Non, certes; mais je voudrais qu'on leur fît comprendre que tout a sa raison d'être en architecture; qu'un artiste—pas plus qu'un honnête homme—ne doit mentir, et que c'est cautelousement, malproprement trahir la vérité que couper, entre autres, une fenêtre par un plancher, donner à une baie de cabinet de toilette la même importance que celle d'une salle de fêtes, dissimuler un linteau sous de la pierre, enduire de plâtre une voûte en fer, dresser une colonne qui ne supporte rien, et mettre des pilastres pour 'faire bien.' Il y en aurait à citer un volume d'exemples de cette force-là."

So the French also are beginning to find that out!

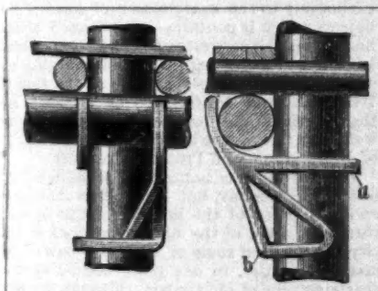
A SPANISH correspondent informs us that the Cathedral of Seville, which last year was supposed to be hopelessly defective, as instanced by the fall of one of the piers in the nave, may yet possibly be put into such a state of repair as to give the structure some chance of holding together for another spell of years. The report of the Government Committee as to the condition of the building is sad enough, but an attempt at restoration is about to be made, and Congress has voted 400,000 pesetas (equal to about 13,500*l.*) for the purpose, as a first instalment, pending the result of the attempt. The examination of experts has proved that last year's catastrophe was due to disgraceful carelessness on the part of the clerical authorities for many years past. The Cathedral has not been watertight for a long period, and the rain has filtered through and disintegrated the mortar of piers and arches from plate to footings; but, although the wet came through everywhere, and the fact was patent to every superficial tourist, no steps whatever were ever taken to mend the roofs,—at a cost of a few thousand francs. Several hundreds of thousands pesetas have already been expended in shoring up the dangerous portions, and some 8 or 12 millions will be required to put this interesting old Cathedral into a state of tolerable repair. The last extensive restoration was by Ferdinand Ruiz, in the sixteenth century.

THE Advocates' Library in Edinburgh is, like the British Museum, possessed of a collection which is enriched by a copy of every book issued in the United Kingdom. Possessed of this privilege, the Faculty of Advocates have, with great liberality and public spirit, thrown open the treasures in their possession to the inspection of literary and other men who desire to inspect or make use of them. The Library was thus of the nature of a national institution for the use of the country at large, and is for Scotland what the British Museum is for England. The expenses, however, of housing and maintaining the collection have not, as in the case of the British Museum, been paid from the public purse, but have been sustained by the Faculty of Advocates. The existing accommodation is now altogether insufficient, and the Faculty, from their limited means, are unable to provide the additional buildings required for the proper custody and inspection of the continually increasing publications entrusted to their care. In these circumstances, the matter has been taken up by the Town Council, and a motion has been unanimously passed that it be remitted to the Lord Provost's Committee to consider as to the advisableness of nationalising the Advocate's Library, and to report. The Library is at present an appendage to the Courts of Law, and occupies a site to the west of the Parliament House, and presents an unfinished jumble of buildings approaching within about 40 ft. of the thoroughfare of George IV. Bridge, and having a breadth of about 60 ft. along that thoroughfare. Upon this site there is ample space for the erection of a suitable building, and the position is appropriate, being opposite to the new Free Public Library, provided by the munificence of Mr. Andrew Carnegie. Upwards of half a century ago the late Mr. Playfair, architect, prepared a plan for the completion of the Library, showing a stately colonnade of Doric columns, a design not likely at the present time to meet with approval. Since then various unsuccessful efforts have been made to get the building completed, and the site is enclosed by a wall of rough rubble, indicative of its temporary nature. This wall extends along the west side of the County Buildings (which adjoin the Library), the unarchitectural back elevation of which was exposed when the bridge was opened up: the late Mr. David Bryce, architect, prepared a new elevation for this building towards the bridge, but it, too, is still *in nubibus*. Should the library be completed, the county authorities can hardly refrain from making a new frontage, and then the whole length of George IV. Bridge would present an architectural and finished aspect.

WITHIN the bounds of the seaboard parish of Irvine, Ayrshire, a deep trench, dating back to before the opening of the eighteenth century, has gone continuously by the name of the "Minister's Cast," although, popularly, the origin of that title had long been forgotten or overlooked.

Operations now being carried on by the Lanarkshire and Ayrshire Railway Company have been interfering with the old work, leading to some temporary flooding which a few days ago formed the ground of a trifling action for damages in one of the local courts. It appears that during the religious troubles, culminating in the rout of the Covenanters at the battle of Bothwell Bridge, June 22, 1679, among the many Scotsmen who fled to the Low Countries for safety, and were for a while exiled there, was one Patrick Warner, a probationer. Warner utilised the period of his banishment by a close observation of the drainage methods affected in Holland, and when, in 1688, the troubles being over at home, he was appointed to the parish church of Irvine, he managed to turn his recently-attained civil engineering knowledge to profit. He acquired from the burgh authorities, on very easy terms, a piece of low-lying morass ground of some considerable extent, and cutting the trench above referred to, succeeded in clearing the area of its excessive moisture, thereby transforming a waste place into property of value. The reclaimed ground took the name of the Meadow Park, which it retains still; and the reclaiming ditch that of the "Minister's Cast." It is of some interest to note that the Meadow Park still remains in the possession of the descendants of the original reclaimer, the Rev. Patrick Warner, the present possessor being Mr. Patrick Warner, of Ardeer. These particulars were elicited through inquiry set on foot by the County Sheriff presiding over the court, who felt interested in the old work thus oddly titled.

THE contrivance illustrated in the accompanying cuts is, we are informed, in considerable use in Germany for fixing the



cross-poles to the uprights in scaffold-building. According to the patentee's description:—

"The holder is made of one piece of iron, and consists of a saddle-arm, clamp provided with spur, and counter-arm provided with spur. It is fixed to the vertical pole by pushing it on sideways and turning it with a jerk, the arms pointing in an upward direction. This can be done with one hand and in a few seconds. The holder fixes itself automatically, so that it is even superfluous to drive in the spurs with the hammer.

The holder thus fixed to the post permits the horizontal beam to be placed on the projecting saddle-arms, and its weight will tend to press the holder against the vertical post in such a manner that the spur on one side and the counter-spur on the other side will both enter the wood and prevent the holder from sliding off.

The holder is now made in two sizes, viz., 4¾ in. and 6¾ in., and it may be pointed out that they can be used with equal security to posts of half their thickness."

We should hardly agree to the statement that the holder can be used with equal security on posts half the thickness of that which would fit the curve; it would have a grip, no doubt, but hardly such a good one. We have examined a specimen of the holder, which is of ample strength for its purpose, and the principle of the grip is of course much the same as that of the "Lewis," applied in another form. The only question is whether the sudden lifting of a heavy weight off the scaffold might not give a shake to the supports at the same moment that it loosened the grip, with the result of a slip. It could not slip far on rough scaffold timber, but it might slip sufficiently to cause an accident, if the spike did not suffice to hold it. We do not think it very likely it would fail in that way; but we should recommend a severe test before adopting it on large work. Its advantages, if proved to be secure, are obvious. The patentee is Mr. Ottoman Erfurth, "Master Mason," of Teuchern, Germany.

WE are indebted to Mr. Robert Boyle for a note as to what is apparently a rather remarkable building in its way, the new Mormon Temple at Salt Lake City, Utah, which Mr. Boyle has been surveying for a scheme of ventilation. He says:—"This building, when finished, will be one of the most remarkable of modern buildings, not only on account of its size and the purpose for which it will be used, but for the immense thickness and strength of its walls, which are built throughout of solid blocks of dressed granite, the basement walls being 20 ft. thick, tapering gradually to the top of the building to a thickness of 6 ft. The tabernacle, which is estimated to accommodate fourteen thousand people, besides having the largest unsupported ceiling of any building in the world, is perfect in its acoustics, a pin dropped at one end of the building being distinctly heard at the opposite end or any other part of the building." This experiment, however, does not prove that a building is "perfect in its acoustics" for speaking and hearing purposes. There is such a thing as a building being too sonorous.

AT the annual meeting of the Institute of Architects of New South Wales, on June 19, the President, Mr. J. Horbury Hunt, towards the close of a clever and spirited address (reported at length in the columns of the Sydney *Building and Engineering Journal*), made some remarks on the Press in regard to architecture, some of which might be read and noted with advantage over here. He said:—

"I venture and with due respect beg to point out to the Press that it does the architectural profession very serious harm, perhaps unknowingly and unintentionally, by giving exceedingly laudable descriptions of proposed buildings based on an opinion formed after inspecting somewhat craftily-prepared drawings got up for the occasion of a festival, or for the ceremony of setting or placing the chief stone, generally termed by the public 'laying the stone.' All competent judges are agreed that our present Town-hall is a piece of building composition highly discreditable to our colony and age, and such as no city like Sydney ought to have tolerated. From my scrap-book I cull this description, inspired by a few lines on a sheet of Whatman:—'The design unites to chaste and elegant appearance a degree of solidity and grandeur which will make it one of the ornaments of the city.' Now this is so much unearned, undeserved credit to the designer (a house-painter from a neighbouring colony) now dead; pity for art's sake he ever lived. . . . It is evident some architectural descriptions of buildings go direct to the Press from the architect, for the sole object of advancing his position at the expense of the whole profession, while also inflicting an irremediable injury upon the art of architecture. In this I think we have the right to beg protection of the Press, whose editors, when they have pointed out to them the mischief and injustice wrought by this class of public announcement, depend upon it, will take steps to stop it and cause a more healthy tone to be given to architectural descriptions of works in progress or completed, than has hitherto existed. . . . There are cases where it is necessary to give to the public some idea of the proposed building; then let the report read: 'We are supplied by the architect' (or other equally responsible person) 'with the following, &c.'"

That seems a very simple recommendation, but it is one which daily newspapers in this country as well as in New South Wales much neglect. The public would be astonished if they knew how many complimentary criticisms on buildings, stained-glass windows, monuments &c., which appear in daily papers, are "got in" by the designers or makers themselves; printed as they are sent just to save trouble, and because they make convenient paragraphs to fill up the corners of a paper. We get similar self-laudatory paragraphs not infrequently, but then we know what to do with them, as their modest and ingenuous authors probably discover when they see them in prir'.

THE RICHMOND MUNICIPAL BUILDINGS COMPETITION.

EIGHT architects have, upon the invitation of the committee, submitted designs for this building, and those of Messrs. Elkington & Son and of Mr. T. Verity have been recommended as worthy of the first and second premiums, respectively, in accordance with the unusually clear and concise report of Mr. James Edmeston, the assessor. All the drawings have been exhibited for a week in a room in George-street, Richmond, where we have taken the opportunity of examining them.

There is little doubt that, judged from most points of view, the award is an extremely fair one. The most important of the conditions appears to have been that the building should cost not more than 10,000*l.*, or within ten per cent. of that sum. None of the competitors, have produced a design which is likely to cost so little, but Messrs. Elkington & Son's is certainly the most economical, at any rate of those that are at all suitable in other ways; their plans are excellent, and their elevations are not so very much worse than some of the others. In this respect none of the competitors are to be congratulated greatly. As in the designs for the Gloucester Municipal Buildings, which we lately described, there is a dead level of common-place, broken only by something worse, which is really quite depressing. Seeing how many of our architects are now doing work which is of undoubted artistic excellence, one cannot but ask why important buildings like municipal offices are, as a rule, so ill-designed

externally. Many answers might be given to the question, but whatever is the real reason, the fact that, as a rule, second-rate designs are chosen for such buildings is deplorable. In competitions especially, plan and cost alone seem to be considered, and so well do competitors know this that even those who can, and who every one knows can, produce an architecturally fine building, hardly exert themselves at all to do it.

To return to the designs for the Richmond Municipal Buildings. The site is a rectangular one of (roughly) about 150 ft. by 50 ft., occupying a portion of the site of the old Castle Hotel, a strip having been taken on the north-west side for a new street, which the long side of the buildings will face. One end of them looks into Hill-street, and the other over some gardens to the river. On the south-east side is a block of shops of considerable depth, which seem to have given some of the competitors a little trouble in the matter of lighting their front block, and nearer the river are some other buildings with rights of light that had to be considered.

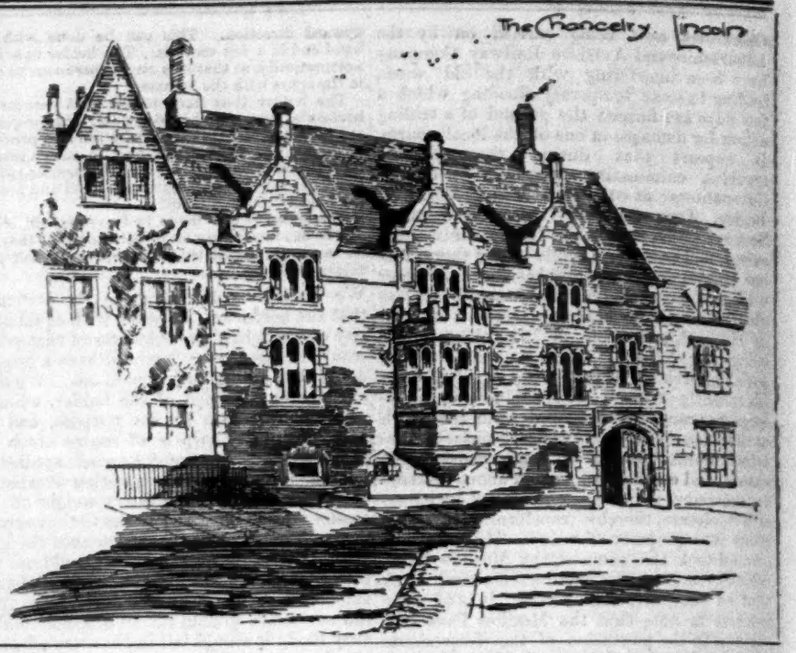
Messrs. Elkington & Son ("Q.E.D.") have placed their main entrance in the middle of the Hill-street front, opposite the end of a corridor, running, about the middle of the site, from it to the entrance of the council-chamber, which is on the same floor on the river frontage. This corridor is lighted near the entrance by a large well staircase, and further on by windows looking into an open area. On the right of the entrance are the vestry clerk's offices, and on the left the rate collector's room. Beyond the staircase are a public waiting-room, offices for the medical officer and inspector of nuisances, a committee room and a chairman's private room and members' cloak-room, &c., attached to the council-chamber. The council-chamber is well arranged, with a small ante-room at one end and a space for the public screened off at the other, and near the latter a secondary entrance for the public, the caretaker, &c. The rear portion of the building consists practically of one floor only, a well-arranged caretaker's residence occupying but a small part of the upper floor. The main front block contains, however, two stories of offices over the ground floor, giving accommodation for another committee room and the surveyor's and accountant's offices.

In the basement is accommodation for heating and electric lighting, and a kitchen communicating by a lift with the ante-room of the Council Chamber, which will make a convenient serving-room when the latter is used for banquets. Every part of the building is well lighted, and all the requisite accommodation is arranged in a compact and convenient manner, with the one exception that the larger committee-room is a long way from the Council Chamber. The elevations show a red-brick building with what we presume are terra-cotta dressings, and high roofs, above which rises an octagonal angle pavilion, surmounted by an open turret. The main entrance is flanked by columns, and surmounted by sculptured figures upon a sort of pediment. But for this imposing feature the building might look rather unfortunately like an ambitious and overgrown villa.

Mr. Verity ("Westward, Ho!") has been somewhat more lavish than "Q.E.D." with his accommodation; he has succeeded in finding a use for the whole of two floors, covering practically the whole area, as well as a spacious second floor. He has thus been able to produce, externally, a much more imposing edifice; and, internally, a more spacious and dignified, though hardly a more convenient one. On the ground floor, a similar corridor to that of "Q. E. D." unites two spacious halls in the middle of the front and rear blocks, respectively. The main entrance is in the new thoroughfare just out of Hill-street. It opens into a wide lobby in communication with the hall in the front block in which the main staircase is also situated. There are besides two other entrances on this floor, one for the councillors, to be used also by the housekeeper, and one for the public to the council chamber. The whole of the floor is occupied by offices and one committee-room. On the first floor the council chamber, with its ante-room, retiring room, &c., occupy the end of the building nearest the river, the surveyor's offices are on the Hill-street front, and between the two are the public waiting-room, the larger committee-room, and the chairman's private room. The size of the caretaker's apartments, which are on the second floor, seems in this design to be rather excessive, and the lavatories occupy valuable space. The strong-rooms in the basement are well planned. The elevations show a heavy but suitable-looking building in red brick and stone or terra-cotta. There is a good deep cornice, broken only by the high council chamber windows, and a tall and slender turret surmounting the roof over the main entrance and looking excessively light by contrast.

"Bon Espoir" and "Concilium," whose designs are commended by the assessor, have placed their main entrances some distance down the new street, and opposite to monumental-looking staircases, built out into large court-yards, taken out of the south-east side of the site. This looks as if it would be a very good and effective arrangement, but the other parts of the plans are by no means equal to the two sets already described. "Bon Espoir's" plans, especially, are terribly cut up, and wanting in architectural simplicity and directness. His elevations, on the other hand, have some good architectural character, and if he could have been satisfied to do without a rather obtrusive angle-turret and so many large dormers, it would have been easier to detect some excellent detail, which they now throw into the background.

Among the other designs, "Syenes" shows a set of plans that would work fairly well, and a rather effective little perspective sketch of his building from the river, showing the gardens and flights of steps. "Rules" exhibits a sepia perspective showing a well-grouped building with a handsome but expensive clock tower. Some skilful and effective pen-and-ink drawing has been expended upon the almost too plain and unambitious design of "Nota Bene," who is, perhaps, to some extent a victim to a conscientious attempt to keep within the specified cost. It is certainly very much to be regretted that competition promoters so frequently set up an impossible limit of cost, which has in the end to be abandoned. It is terribly unfair to those competitors who do observe the rules of the game, and, in fact, often reduces the whole affair to a question of making the best guess or getting the best information as to which of the incompatible requirements of the promoters may be disregarded with least danger.



The Scandinavian Wooden Villa Export Trade.—Of late years the export to warmer climates of wooden villas from Norway and Sweden has greatly increased, and a further impetus has been given by the handsome show of villas and Norwegian native habitations in the Norwegian section of the Paris Exhibition, which has resulted in orders for these structures from various quarters. An agency has also been established in Paris for the sale of Norwegian villas. The Ekman Planing Factory of Stockholm has just executed an order for the wood-work of a new hotel in the Canary Islands.

THE BRITISH ARCHÆOLOGICAL ASSOCIATION AT LINCOLN.

THE forty-sixth congress of the British Archæological Association commenced on Monday, the 29th of July, in the ancient city of Lincoln, a centre from which visits were made to various points of interest around it; but there is, indeed, so much to be seen of antiquarian interest and artistic beauty in the city itself, that it is not surprising to find that the two first days were devoted exclusively to the examination of some of the objects which it contains. The Council of the Society may be congratulated on having selected Lincoln as its meeting place, and at having secured the hearty co-operation of the Earl of Winchilsea and Nottingham as President for the meeting, and for the following year, as well as in having the active help of the Bishop of Nottingham, and Precentor Venables.

The meeting was announced to begin at two o'clock on Monday, but long before that hour an active party of the members might be seen threading some of the narrow passages of the city in pursuit of some of the less known of its many antiquities, in one place coming upon a charming relic of old timber,—fifteenth century work; in another, the remains of an ancient mansion, or the stonework of some of the very many demolished churches. The party was under the guidance of the Rev. Canon Barrett, and much interesting work was done.

The sun shone magnificently, showing the grand old cathedral, built on the highest ground in the city, as the members and their friends assembled in the County Rooms in the high town. The spacious Hall was filled by the party, and here the noble President was formally introduced to the Mayor and Corporation of Lincoln, and a beautifully illuminated address of welcome from the civic body was read. The ancient mace and other objects were inspected, after which the party proceeded to partake of luncheon on the invitation of the Mayor and Corporation. After the luncheon, the Earl of Winchilsea proceeded to deliver the inaugural address, in the course of which he remarked that the people of Lincoln had many things to be proud of, but there was nothing which they ought to be more proud of than the antiquities which had been committed to their care. The natural advantages of the place could not escape any Government or people, and it was, therefore, not surprising to find that even in the early British times a city was founded here which took its name from the river Lindum. Passing on to Roman times, he called attention to the Newport arch in Lincoln, one of the most interesting—if not the most interesting of Roman relics in Britain. In that arch they would see simplicity, strength, and durability, and would recognise in it one of the works which were worthy of the nation that became the masters of the world. Not only in this city were the Romans pioneers and engineers, as they had always proved themselves to be,

but in other parts of the country their work remained. In the great road which led north and south of Lincoln, and was still the main thoroughfare, Ermine-street, they traced the strong hand of the Romans, and in the bank that still protected the farmers of the East Fens from the incursions of the sea, and which for 1,500 years had successfully resisted the rising tide, they recognised their far-sighted policy. These were some of the interesting relics by which they were surrounded. There was something particularly interesting to Englishmen in tracing these rude but solid mementoes which that great nation had left in our land, because of all the empires that had borne sway in the world, he knew of none which was so nearly approximated to our own as the Roman Empire in the spirit in which it was conducted, in the justice of its laws, in the great engineering works by which it covered the surface of the globe, in that high intelligence and that lofty common sense which animated it in its best days. Then, coming to later times, the President observed that the history of Lincoln was the history of England, reminding his hearers of the important part played by Lincoln in the contests between the Saxons and the Danes, and of the fact that almost every king who reigned from the time of the Conquest down to the time of Henry VII. was attracted within the sphere of the city's influence. After a reference to the gradual growth of the beautiful cathedral, he said that not only would Lincoln itself command the admiration of the members of the Association, but they would find that Lincolnshire would make good her principal claim to being eminently a county of parish churches. Proceeding to consider the utility of archæological research, his lordship said it must be admitted that if they compared this century with the century that preceded it there had been an enormous revival among public bodies and by private individuals who were custodians of many valuable treasures, in regard to the interest they bestowed on objects of this class. People might ask of what practical use these things could be. He protested against the idea which would for a moment limit a great nation to any small view of what was necessary to its existence. The treasures of art and of science, the memories of our ancestors in a bygone generation, were just as much a necessity to our existence as the air we breathed. In the mighty cathedral one generation after another had laid its dust within those walls, but before it passed away each age made its contribution to the fabric, a contribution lighted by genius and warmed by faithful and true devotion, so that when all those ages had passed away we had in that cathedral a great treasure-house, not only of wood and stone, but of the spirit and devotion of our ancestors (applause). It was a precious heritage and a very practical advantage, and it ought to constitute an education to the young men of this city.

The address was delivered without notes, and was listened to with all the attention that it merited. Very hearty applause followed, and after the Mayor and Corporation had been warmly thanked, a considerable number of the party proceeded to the extreme south end of the city to begin the survey of some of the buildings of the city. Under the guidance of the Bishop of Nottingham the Church of St. Peter at Gowts was inspected, the party paying a tribute of admiration in passing the pretty spire and church of St. Mark's, which was rebuilt not many years since from the designs of the present Mayor, whose architectural taste is shown by several of the other buildings at Lincoln. St. Peter's at Gowts, the well-known early church, with respect to the history of which so much has been written, and upon which there has already been much controversy, is likely, with its sister-church, St. Mary-le-Wigford, to afford no little work to the antiquaries present, and it is to be hoped that some new light will be thrown during the Congress upon the subject of the date of its erection. The Bishop also described St. Mary's Church, and pointed out many of its peculiarities. Both churches have been restored creditably, but an ominous-looking crack in the tower of St. Mary-le-Wigford will soon require special attention, or the tower will be in danger. John-of-Gaunt's Stables, as the group of late Norman buildings are popularly called, and the old timber houses on the old Norman bridge beneath High-street were also visited and described, and the first day's work was brought to a close.

The archæologists were up betimes on Tuesday, the 30th, to be present at the ancient Guildhall, in the Stonebow, as the picturesque arch over the High-street is designated. Here the party was received by the Mayor (Mr. W. Watkins), supported by several members of the Corporation. The regalia of the city were laid out for inspection, and Major Lambert, F.S.A., gave a lucid description of each of the articles, concluding his remarks by an offer to have certain repairs that were needed effected at his own cost—an offer that was at once cordially accepted by the Mayor. The various charters of the city and their seals were described by Mr. de Gray Birch, F.S.A., and Mr. Loftus Brock, F.S.A., brought to the notice of the party some remarkable terra-cotta water-pipes of Roman construction, which had been discovered during the recent deep drainage works carried out in the city. These are now without a permanent place of keeping, and they justify Mr. Brock's plea for the establishment of a local museum, there being no such institution as yet at Lincoln. The Mayor, in response, said that the drainage works alone had produced relics almost sufficient to stock a museum, but that these had been scattered, owing to there being no fitting receptacle for them. The Guildhall has a good fifteenth-century roof, and the members heard with great satisfaction of the restoration of the building and the ancient gateway below it. It had been seriously proposed, only a few years ago, to demolish both gate and hall, a proposal that was happily frustrated. Emerging from the quaint hall, progress was made to the beautiful church of St. Swithin, recently erected by Mr. Fowler, of Louth, a building well known to many of our readers. In it is preserved a remarkably fine Roman altar, which was found during the building of the spire, fortunately, with its face downwards, in a bed of sand. The preservation of the inscription is, in consequence, perfect, and the lettering is as fresh and sharp as if only cut in recent years.

The Old Grammar School, formerly the Grey Friars', on the north side of the church, was then inspected, the undercroft being vaulted from end to end, and having a range of pillars down the centre. The work is of the middle of the fourteenth century.

After passing that beautiful fragment of late Norman architecture, the Jews' House, and another example of similar date, discovered and restored in recent years, the grand old Cathedral was reached punctually at eleven o'clock. Here the party was met in the Consistory Court by the Rev. Precentor Venables, who gratified his audience by a lucid lecture upon the architecture and history of the Cathedral, fully one hour in length. The lecture was illustrated by Professor Willis's plans, and by elaborate diagrams of no little interest to the members, since they were the work of the late Edmund Sharpe. At the conclusion of the lecture, Mr. Loftus Brock, by aid of the drawing of the west elevation, called attention to the simple rule of proportion, which has often been mentioned in these pages, namely, that all the composition falls within the enclosing lines of an acute triangle. It was pointed out that the apex of this triangle was now wanting, owing to the absence of the ancient spires, but that the rule of proportion of which this Cathedral is a remarkable example, gave the height for the central spire and that for the two western spires.

Under Precentor Venables' guidance, a perambulation of the Minster was made, commencing at the west end, proceeding to the transepts, and to the work of St. Hugh within and beyond them. A detour was then made to the private garden of the deanery, in order to inspect the beautiful view of the Cathedral seen from the north-west, which was seen to great advantage under a magnificently blue sky and brilliant sunshine. Progress was then made to the cloisters, which may be considered the present museum of Lincoln, in the absence of any other. Among Roman moulded work, small decorated columns, pottery and pavements of many colours, are examples of Saxon slabs with interlaced patterns, found during excavations, and, alas! of much carving which should never have been removed from the Cathedral. Here are the originals of the elaborately-carved shafts of the western doors (Bishop Alexander's work, most probably), which were restored some years ago by the substitution of modern copies for the originals. Fortunately, the originals are preserved here.

The Precentor called attention to what is being done at the cloisters, which may be of service to be repeated here. The decayed nature of much of the work requires attention to be directed to it, and the old work is being taken down stone by stone. Every portion fit for re-use is replaced in its exact position.

Two sides of the cloister, the south and the west, have been thus treated, and it was gratifying to see what a great mass of ancient work has been replaced uninjured by the process. This is a different course to the entire renewing of the work, and it is worthy of careful imitation on the part of the custodians of our ancient buildings, whenever repair may be an absolute necessity.

Certain of the party inspected the contents of the Library, under the guidance of the Rev. A. R. Maddison, Succentor and Priest Vicar, when the most ancient of the contents were pointed out, and the fabric itself was examined. Part of the building is of 15th century date, and the remainder is the work of Sir Christopher Wren. On returning to the Cathedral, the Angel Choir, the eastern transepts, and the sites of the shrines of St. Hugh, and of the boy wrongfully said to have been murdered by the Jews, were inspected, and at the Galilee porch, on leaving, a hearty vote of thanks was tendered to Precentor Venables by Mr. W. H. Cope, F.S.A. After luncheon, the Castle of Lincoln was inspected, under the guidance of Mr. Geo. Patrick, who read an interesting paper on the history of the fabric. The salient features of the structure, the two mounds, the

keep, Cobb's Hall, which consists of two stories of vaulted dungeons, in which the rings for prisoners still remain, and the herringbone masonry of the curtain walls, were all pointed out. Past the Church of St. Paul, a modern structure, which is supposed to mark the site of the primitive Church of St. Paulinus, in the centre of the old Roman city, the party proceeded, under the guidance of Mr. Roach Smith, F.S.A., to survey the relics of Roman times. The remarkable portico of massive columns, 2 ft. 9 in. in diameter, discovered a few years ago, and happily preserved, thanks to Mr. Allis's care, was minutely inspected. These remains consist of the moulded bases, and about 5 ft. in height of five out of six columns, buried beneath the modern houses of Bailgate. Mr. Allis, builder, however, on discovering the remains, ingeniously contrived to support his new work on piers and girders, and it is possible to inspect in comfort these massive works of a long past people. Mr. Roach Smith readily showed that the portico, the angle-columns of which are double, in one case at least, is at right angles with the mass of Roman walling known erroneously as the Mint Wall. The building may have been the Basilica of Roman Lindum, but it is equally likely that the portico, at least, was that of a temple. Not far off, in the exact centre of the original city, was found a Roman milestone, now safely deposited in the Cathedral cloisters, where it had been inspected earlier in the day. The well-known Newport gate was then visited, which appears to be put together without mortar, although pointed in later times.

The deep and wide fosse around the northern and eastern sides of the city was inspected, where occasionally a fragment of the actual city wall was met with, built of rubble, laid here and there herringbone wise, with no layers of tile as at the Mint Wall, and no pounded brick in the mortar. A pleasant halt was made in the grounds of Mr. and Mrs. Melville's house, after which the party continued the examination of the wealth of ancient work of this part of the city, occasionally inspecting an ivy-covered tower, or a Roman tomb, or a timber-framed house. The long day's work was brought to a close by a visit to the ruins of the ancient palace of the Bishops of Lincoln, now in part restored, again under the guidance of Precentor Venables.

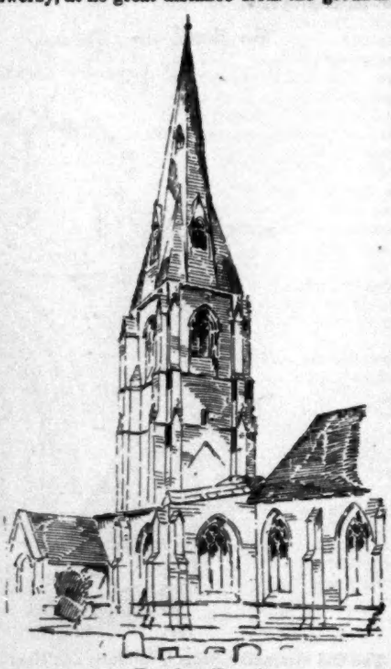
In the evening the members assembled in goodly numbers in the Theatre of the School of Art, the President, the Earl of Winchilsea and Nottingham, being in the chair. Papers were read as follow: "On a Visitation of Lincoln Cathedral in 1436-7," by the Rev. A. R. Maddison. This interesting paper referred to a very loose state of things at the time named, the canons quarrelling with themselves and with the Dean, part of the cloisters pulled down to build a stable, two of the parish churches demolished to sell the stones, charges of immorality, and such like. "On a Roman Lanx, or Charger, of Pewter, found at Lackenham Fens," by Mr. Hy. Prigg; "Somerton, and its Royal Prisoner: King John of France," by the Bishop of Nottingham; and on "Mediæval Walling," by Mr. Chas. Lynam.

On Wednesday, the 31st, a visit was paid to Haverholme Priory, the residence of the President of the Association. This is a well-built, modern Gothic house, in the style of thirty or forty years ago; and it can justly be termed a modern antique, although the good taste of the present owner has converted it into a pretty home. The party reached the mansion by way of Ruskington, from Lincoln.

On assembling on the lawn, which extends along the entire length of the garden front, the history of the site was told by the Bishop of Nottingham. Here, in early Norman times, was founded a Cistercian Monastery, by Bishop Alexander, of Lincoln, who tenanted the building with twelve monks from Fountains Abbey. For a couple of years they endured the ague and other discomforts arising from the wet, dreary nature of the site, and at the end of that time they could endure it no longer, but petitioned to be removed. They obtained their release, and after returning to Fountains for a time, they finally settled at Louth Park. The lands at Haverholme were afterwards granted to the then new English order of Gilbertines, founded by St. Gilbert of Sempringham, who settled here in 1139, and who do not appear to have suffered as did their predecessors, for they remained here till the suppression in 1538. The two establishments were stated to have been separate buildings on different sites, but nothing that was shown to the visitors supported this supposition, which, however, is likely enough, since the requirements of the two orders were somewhat diverse, the Gilbertine establishment consisting of canons and nuns, of whom there were once as many as fifty canons and one hundred nuns,—a number that had sadly dwindled away at the time of the Dissolution, when a prior and six canons were the only occupants. St. Thomas à Becket, of Canterbury, found a refuge in the Priory when a fugitive from the south of England. After the Bishop had narrated the somewhat slender history of the site, the party made the tour of the pleasure-grounds around the house. Here, amid flower-beds and lawns, is the site of the ancient cemetery, covered with ancient stone coffins, while close at hand is the solid base of a pier with engaged shafts of early English date, which plainly shows that the site of the church is close to the cemetery. None of the walls have yet been found. Returning to the house, various interesting antiquarian objects were shown by the President to his numerous guests. A fine collection of miniatures was inspected in the library, where also was the celebrated Dugdale manuscript.

This is a remarkable collection of drawings of various monuments and brasses, with descriptions, once within the churches of Peterborough, Ely, Lincoln, Newark, &c., and drawn to preserve a memorial of them prior to the times of trouble which the author foresaw to be approaching. Many of them are now destroyed. The well-preserved book was attentively examined, as were also several other manuscripts, transcripts of pedigrees, title-deeds, &c., all of which were explained by Mr. W. de Gray Birch, F.S.A.

After thanks had been expressed by the Mayor of Lincoln on the part of the members, a visit was paid to the beautiful Church of Ewerby, at no great distance from the grounds



Ewerby Church.

of Haverholme. Assembled within the building, the Bishop of Nottingham again described the fabric, which was seen to great advantage, and its simple, but remarkably effective, architectural members examined in detail. The Earl of Winchilsea has taken great personal interest in the work of repair, which is being slowly carried out. The solid broach spire at the west end, and also many other parts of the church, are built of stone as perfect now as when first erected, and the surface tool marks of the masons are distinctly visible. As is so well known to our readers, the fabric dates from the middle of the thirteenth century, but the visitors had no difficulty in finding traces of earlier and later work. Part of the existing font is of early date, while in the floor of the north aisle lies a fine incised slab of Saxon knot-work, which, according to a suggestion made to the President, who accompanied the party, will shortly be raised, and placed for safety upright in the wall. A good chancel screen, of fifteenth century oak-work, in somewhat dilapidated condition, still exists.

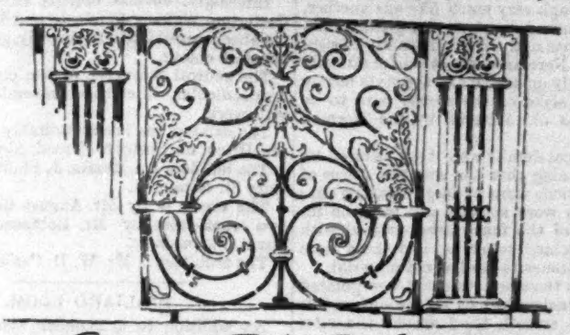
Passing the little church of St. Oswald at Howell, the party proceeded direct to the famous church of St. Andrew, Heckington, still under the guidance of the Bishop of Nottingham. The contrast between these two buildings is very great, one being designed in pure but late Early English, the other in the early Flowing style of sixty or seventy years later, and now seen to great advantage since the roofs have been raised in recent years to their original pitch, the chancel having received its arched and boarded ceiling only within the last few months, the latter from the designs of Mr. Fowler, of Louth. Taking up his stand beneath the chancel arch, the Bishop rendered historical evidence for assigning the rebuilding of the church, as it is now seen, to Richard de Pottesgrave, Chaplain to Edward II., and whose tomb was pointed out on the north side of the chancel. The effigy is a very beautiful one, showing all the details of an elaborate ecclesiastical costume. The fine lofty sedilia, and the richly-carved Easter Sepulchre,* opposite to it, were attentively examined. These are covered with minute carving, still in perfect condition. Carriages being resumed, the party proceeded through flat country covered with happy signs of an abundant harvest, likely to be gathered in a few days, with frequent glimpses of lofty spires and large churches at no great distance. Sleaford was reached in time for luncheon, after which the Bishop conducted the members to the curious church of the town,—a fabric remarkable not alone for elaborate work, but for great irregularity of plan. It is a large structure, with the west fronts of its wide flowing Decorated aisles coming up flush to the western face of a singular tower and spire of very early thirteenth century work. The foundations of the tower had been sinking for many years when, not long since, a flash of lightning struck the spire during divine service, to the great consternation of the congregation. This catastrophe has occasioned the entire rebuilding of tower and spire, on new foundations, the old stones to a great extent being re-used. Entering the restored fabric, the Bishop pointed out the many and various objects of interest which it contains, the principal of which is a very fine and elaborate rood screen of the fifteenth century, except the parapet, in perfect condition, and having a curious projection in the centre, which, the Bishop said, had existed for many years, and was original. His Lordship then guided the party to the site of the once celebrated castle, now an open space cut up with traces of foundations and the remains of ditches. A small portion of masonry overturned alone remains above ground. It was erected by Bishop Alexander in the early part of the twelfth century.

At the evening meeting papers were read by various authors. These were as follow:—"The Churches of Lincoln City," by Mr. E. P. Loftus Brock, F.S.A.; and on "Joan Beaufort," by Mr. J. P. Pritchett. A third paper by Mr. Romilly Allen, F.S.A. (Scot.), on "The Early Norman Sculptures at Lincoln and Southwell," had to be deferred for want of time. The scope of the first paper was to draw attention to the remarkable group of churches, fifty-two in number, which formerly existed at Lincoln, and it was suggested that the great bulk of these dated from Saxon times, judging by the evidence of the dedications, which were to saints of Saxon name, or who were popular in Saxon times: also by the existence of workmanship of that early date. A parallel was then drawn between the work of the two towers of St. Mary le Wigford and St. Peter at Gowts, and corresponding details in the Church of Stow, to support the statement that these three buildings were of moderately early Saxon date. The evidence adduced was curious enough, since it showed that saw-cut joints and fine bedded masonry existed in Saxon times, while the earliest Norman work in Lincoln, that of Bp. Remigius' earliest cathedral, on the contrary, was roughly worked, with wide joints.

On Thursday, August 1, the programme provided for a visit to the ancient town of Boston, proceeding from the Great Northern Station. Boston was reached by 12 o'clock,

* An illustration of this will be found in the *Builder* for February 9, 1884; and one of the sedilia in the *Builder* for November 5, 1887.

and the party proceeded under Mr. Loftus Brock's guidance to inspect the grand old Church of St. Botolph, the steeple, or "stump," as it is popularly called, having been a conspicuous object in the journey of approach. After inspecting the interior, and the welcoming of the party by the vicar, the history of the building was briefly told within its walls. The building is remarkable for its extreme lightness, the width and height being great, while the pillars are extremely slender in relation to the area covered by the roofs. Mr. Brock assigned dates for the various portions, but he pointed out that the recorded year when the foundation of the steeple was laid, 1309, could not apply to the present fabric, which is wholly of the early part of the sixteenth century, and one of the latest triumphs of Gothic architecture. A canopied doorway, of about 1330, has, however, been re-erected in its west front. The foundation referred to most probably related to an earlier tower, belonging to the earlier church superseded by the present one. The communion railing is a remarkably good piece



Communion Rail, Boston Church

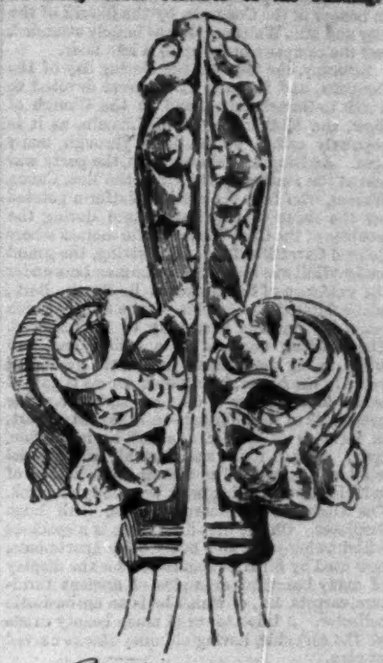
of Renaissance metal-work. A just tribute of respect was paid to recent good taste, which, in the restoration of the church, caused the old Jacobean pulpit, in which Dr. Cotton used to preach, to be preserved, although its style is not Gothic.

An adjournment to the vicarage was then made to inspect a remarkable example of wood-carving. This is a small panel only, containing a coat-of-arms, supposed to be that of one of the Abbots of Bardney, but the workmanship is of the highest order. Traces of two of the old Friaries were then inspected, also the capital half-timbered structure called Shodfriars' Hall, now well restored as a public hall for entertainments, and also the curious incised slab representing a merchant, Wisselus Smalenburgh, dug up about eighty years ago. It has been several times figured, and the party found it still preserved, fixed against the external wall of one of the houses in Spain-court, recently covered with a coat of paint, doubtless for its preservation. The old Grammar School, and the curious red-brick tower formerly belonging to the Hussey family, were inspected, and on the return journey from the latter, a brief halt was made at the Guildhall, formerly the Guild of St. Mary.

After luncheon, Tattersall was reached by 4 o'clock, and a visit was paid to the ruined keep of Tattersall Castle, built of red brick with stone dressings, and still, although roofless and floorless, in perfect condition, so far as regards the brickwork of the walls which retain even the sharpness of the pointing, as left by the builders in the fifteenth century. The Tower is one of great beauty, and was erected by Cromwell, Earl of Essex, Keeper of the Purse to Henry VII. The elaborately carved chimney-pieces, on which the purse appears under several aspects, and alternating with heraldic shields, well-known by the casts in South Kensington Museum, are still in fairly good condition. But why cannot the custodians provide a projecting ledge of slate or lead to give them some little protection from the elements? At present, the descent of rain-water from the summit of the lofty walls is bound of necessity to pass over the chimney-pieces in question, and the ledges suggested would easily and cheaply afford a good deal of protection. Mr. Brock, in describing the building, referred to the plan of the castle, unusual for the period, the keep being almost a return to the arrangements of a Norman castle, at a time when elsewhere in England the open hall with its gallery and contiguous withdrawing-room had quite superseded older arrangements. The explanation was, probably, the proximity of the castle to the sea-coast, and the consequent necessity for protection against sudden invasion. Adjoining to the castle is a grand old collegiate church, consisting of a low, solid, western tower, a spacious nave, side aisles, and north porch, transepts as high as the nave, and a chancel of lofty dimensions. Traces of low buildings exist all along the chancel on the south side, apparently never completed. There is, internally, a fine stone rood loft, and in the north transept there are a great many brasses of considerable beauty. Fragments of elaborate oak screen-work are preserved in the church, and the whole of the lower portion of the large east window is filled with fragments of very good fifteenth-century glass, removed from other windows and placed here for preservation. The chancel only is used for worship by the parishioners, and the appearance of so large a structure in so small a village is not a little remarkable. The nave, aisles, and transepts are entirely open, and are not filled in with seats. The font is in part a relic of a church 100 years older. The vicar, the Rev. M. T. Latham, met the party, and rendered many items of information relative to his beautiful church. While the castle is mainly of red brick, the church, erected at the same time, is wholly of stone. Owing to the difficulty of approach, a visit to Kirkstead Chapel, a gem of early thirteenth-century art, had reluctantly to be given up. This is the more to be regretted since the organisers of the Society were anxious to make its condition of decay publicly known. Unless some steps are taken for its preservation, it is greatly feared that it will soon be among the things of the past. After the return to Lincoln, a public meeting was held at the School of Science and Art, when a lecture was given by the Rev. Precentor Venables, illustrated by lime-light views of all the principal ancient buildings of Lincoln city, including many of the demolished churches and of the city gates. Owing to the lateness of the hour, the following papers, proposed in the programme to be read, had to be postponed:—1. Roman Discoveries at Lincoln, by Mr. M. Drury. 2. The Legend of the Lincoln-green Lady, by G. R. Wright, F.S.A.

Friday, the 2nd, was devoted to the survey of the old town of Newark and a visit to Southwell Minster, the former place being reached at 10.15. A visit was at once made to the fine old ruin of the Castle, which overlooks the river. It is now seen to great advantage, owing to the public spirit of the inhabitants, who have recently laid out the grounds with pretty walks, and, by judicious planting, the whole area is made a place of much beauty, the Castle ruins bounding one side of the enclosure. Great dignity is given to the town by this pleasant promenade, and all the more so since it is placed at the principal entrance from the railway (Midland) station. The archæologists were met by the Mayor, various members of the Corporation, the clergy, &c. Mr. Loftus Brock, F.S.A., described the building, which was another of Bishop Alexander's castles. Here King John died. The Castle was dismantled after the Civil Wars, and has now been acquired by the town authorities. After pointing out the general plan of the Castle, Mr. Brock concluded by referring to the recent praiseworthy action of the town in having thus laid out and secured the ruins, giving thus a good example to other municipal bodies, which, it is to be hoped, they will follow, and thus, while they adorn their towns, they will be effectually preserving some object or other of national importance.

At the fine old church of Newark the party was again met by the Lord Bishop of Nottingham, who briefly and clearly described the history and the architectural peculiarities of the beautiful structure. The oak screens are lofty and of great artistic merit, as are also many other features of the building.



Poppy head & Stalls
Newark Church

An old crypt, beneath the chancel, has not long since been cleared out, and it was inspected by the party. It is of the same age as the cruciform church which once occupied the site, and of which the only other visible portions within are two of the piers of the crossing, now worked up into the existing nave arcades. While some of the curious old houses of the town were being inspected, a visit was paid by some of the party to the church at Hawton, about two miles distant, where a pretty rood-screen was inspected, and a remarkable Easter sepulchre, doubtless formed by the same workmen who erected that at Heckington, the workmanship being very similar. The east window, too, has similar peculiarities. Above the upper part of the sepulchre is Our Lord's ascent from the Mount of Olives. As if to record the old tradition of Our Lord's footprint being preserved there, the sculptor has skilfully carved the impress of a foot on the rocky foreground.

The Hawton party, on the return journey to Newark, had a good view of the beautiful spire, which is a very conspicuous object for many a mile.

Progress was next made to Southwell, under the guidance of the Bishop of Nottingham. Arriving within the old Minster, the Bishop gave an ample description, after which the party followed him to the partially-restored Bishop's palace, where he favoured the members with a description of the remains and of the new works already carried into effect. Here leave was taken of the Bishop, with many expressions of thanks for all courtesies rendered. Proceeding back to the Chapter House of the Minster, Mr. Loftus Brock exhibited a series of large plans of the fabric, showing the relative positions of the various works, and the architectural growth from Early Norman times, when the Saxon church was rebuilt. These had been sent specially by Mr. Ewan Christian, who was unable to join the party, and they were accompanied by sufficient descriptive particulars, which were read. The existing Early English choir had been built around the Norman one, while the latter was standing, and the junction of the old and new works, after its removal, explained some curious discrepancies of the string-courses. The floor levels are singularly different one from another, and the old lines have been exactly followed in the restoration by Mr. Christian. A remarkable stone, covered with early interlaced figures, doubtless a relic of the Saxon church, was inspected. It was used by the Norman builders as old material in the west wall of the north transept.

The curious old hostelry, the "Saracen's Head," where King Charles I. made terms

with the Scotch Commissioners, was inspected by many of the party, after which the return journey was made to Lincoln in time for the members to be present at a conversazione given in honour of the Congress, by the Sheriff of the city and Mrs. Whitton. It was largely attended, and the company broke up at a late hour.

Saturday, the 3rd, was the closing day of the Congress, and its early hours were devoted to a visit to Gainsborough and to the Church of Stow, the Mother Church of Lincoln, as it is popularly called by tradition through many ages. Arriving at Gainsborough, the party was met at the station by the vicar, the Rev. Canon Warner, who from the station platform pointed out the scene of the battle here during the troubles of the Civil War, and the morass where Colonel Cavendish fell. On arriving, the grand ancient Hall was inspected by the members under the guidance of Sir Hickman B. Bacon, Bart., who exhibited a large plan of the fabric, which made his remarks very easy to be followed. The building consists of a centre and two wings, facing the cardinal points, the great hall being in the centre, from which access is gained to the first-floor by a circular staircase. The great bulk of the building,—all the central part, in fact,—is of timber, the hall having a fine, open, arched roof, and a small stone oriel window, groined. The remainder is either of half-timber on a brick base, or wholly of brick. The kitchen is of enormous size, with huge fireplaces. On the first-floor there is a spacious withdrawing-room and many other apartments, now used by Sir Hickman Bacon for the display of many beautiful examples of ancient furniture, carpets, &c., of which he is an enthusiastic collector. A brick tower of much beauty exists on the east side, having chimney-stacks curved on plan.

The members heard with much gratification of a proposal on part of the present owner to present the Hall, under certain conditions, to the town. The dreary, open approach could readily be transformed by the hand of taste into a lasting ornament to the somewhat gruesome town. The party then proceeded to the parish church, a structure rebuilt in the Palladian style of the last century, except the western tower, which is ancient,—of the fifteenth century. The Rev. Canon Warner had laid open in the vestry a curious series of entries in the parish registers for the inspection of the members, and also a valuable collection of letters from various members of the Cromwell family, some of which were read. After inspecting the church plate, many of the members proceeded through uninviting courts and alleys in quest of old, brick-built houses, of which there are a certain number having some pretence to beauty, a merit which is not possessed by very many, although the town has a certain picturesque appearance,—"Dutch," as one member of the party was pleased to call it.

The carriages were then resumed, the first stopping-place being the curious little church at Coates. Coates Church is a small building with a double bell cot at the west end, a circular south door having large dog-teeth carved around it, and a font of very ancient date, probably earlier than the Norman walling of portions of the exterior. The interest of the building consists in its beautiful rood screen, which still preserves its cornice, gallery, and parapet. There is no chancel arch, and the gallery and parapet probably owe their preservation to the fact that their removal would have laid bare the rough beams of the roof. These latter are covered with upright boarding upon which a pattern had been painted, and also probably the figures of the rood. A portion of a single figure on the left-hand side is still observable. The archæologists saw in the centre of the parapet a similar projection of original work to that which had exercised them at the Sleaford screen. There are some curious monumental tablets in the church, of late date. The journey was then continued to the village of Stow, whose huge church had been seen looming in the distance high above the little houses of the village for a goodly distance. On being assembled within the spacious nave, the vicar, the Rev. W. N. Usher, bade the party welcome, and proceeded to unfold the early history of the building. Founded in early Saxon times, there were records of rebuildings after the church had been burnt by the Danes in 870. Afterwards it appeared that the nave and choir had been rebuilt in early Norman times.

Mr. Loftus Brock, F.S.A., then sketched the architectural history of the existing fabric, and began by saying that, although there had been great discussion as to where was the ancient Bishop's See of Sidnacester, and there was no documentary evidence to fix it at Stow, yet we might be assured that it actually was here from the fact that here were substantial remains of the largest Saxon church in England. The transepts, from north to south, measure 85 ft. within the walls; the square of the great tower measures 36 ft., or but 3 ft. 9 in. less than the Norman central tower of Southwell Minster. The great proportionate height was before them, and we might well, in consequence of these facts, be assured that this was part of the lost Saxon Cathedral, so called by ancient tradition. Proceeding to the structural evidence he said that they were confronted with two varying works. Firstly, that of the nave and choir, which were plainly of Norman work, fine-jointed, with the zig-zag ornaments, and agreeing in every material particular with the work of Bishop Alexander at Lincoln. Secondly, that of the four tower arches, their piers, and the great bulk of the walling of the transepts. In these two different periods would be observed, although very much like one another, but one was marked by signs of a great conflagration, the other not. That these works were anterior to the Norman portions was practically evident, not only on account of the style but by the fact that some of the stones were to be seen re-used as old material by the Norman masons.

Many technical details were then referred to, the principal being that the wrought stones of the Saxon portions were of large size, saw cut; that the faces were smooth, and in some instances some of the faces were covered with peculiar, irregular, toolmarks, and these were visible on the stones re-used as old material.

A window in the south transept was pointed out as having toolmarks over all the surface left and right of a smooth band around the outer face, similar to what was shown at the Church of St. Peter at Gowts. The early date of the work at Stow is indicated tolerably well, whether it is regarded as being anterior to the burning in 870, or after the rebuilding, the work of both dates being very similar. At the north-west angle of the north transept, Mr. Brock measured before the members present one of the saw-cut joints of the massive quoins, to prove that fine-jointed masonry actually existed in Saxon times. The joint hardly measures a 20th of an inch. This angle is undoubtedly a portion of the oldest part of the fabric, and the evidence, although unexpected, is beyond all doubt.

The four fine arches which once supported the Saxon central tower now no longer do so. Within their square on plan other piers and arches have been erected, thus reducing the size, in thirteenth century times, and these now carry the present fifteenth century tower.

The chancel is a good example of Norman work, vaulted, and with an arcade all round, internally. The Vicar said that several years ago, when these walls had to be underpinned, traces of the bases of columns were found, showing that, in Saxon times, there had been aisles to the chancel.

Lincoln was reached in good time, and the proceedings of the Congress were brought to a close by a dinner at the White Hart, the Earl of Winchilsea and Nottingham presiding; after which, thanks were rendered to all who had helped the Association to realise what has been a meeting of great interest and enjoyment, particularly to those of the party interested in the study of ancient buildings. The number of beautiful churches inspected has been very great, and the workmanship has been of all ages and styles, erected with good, durable stone, and still, in very many cases, in perfect condition. The weather was particularly fine.

Monday was the first of the special days, and it was devoted to a visit to the ruins of Thornton Abbey, and to the two churches at Barton-on-Humber. These buildings were inspected and described by the Rev. G. Hogarth, vicar of Barton; Mr. John Reynolds, and Mr. Loftus Brock. The remarkable Saxon tower of St. Peter's received special attention, and Mr. Brock pointed out what may be a matter of some comment in years to come. It is that certain of the stones are jointed with mortar formed of pounded red brick. This is not Roman mortar, or mortar made by Saxon builders after the Roman manner, as might, presumably, be supposed, but the work of some local plasterer, not many years ago. It occurs also at the Church of St. Mary's. Tuesday's programme included visits to the village churches of Navenby, Wellingore, Welbourne, Leadenham, and Brant Broughton, concluding with a visit to the ruins of Somerton Castle. Wednesday, the 7th, saw the conclusion of the after-days of the Congress, which was devoted to visits to Grantham, for the inspection of the grand old Church of St. Wulfran, Belvoir Castle, and Bottesford Church.

Illustrations.

CHURCH OF ST. JOHN-THE-DIVINE, STANSTEAD-MONTFICHET.

THE Church of St. John-the-Divine has been erected in the centre of the scattered Essex village of Stanstead-Montfichet, as a chapel-of-ease to the parish church, which lies some distance away on the outskirts.

Local red bricks have been used for the exterior, with Bath and Ketton stone, the latter in exposed positions.

Internally, several oolites, namely, Ketton, Casterton, Weldon, Corsham, and Stoke Ground, have been mixed indiscriminately, giving a varied effect of colour.

The general character of the church is Late Perpendicular, which becomes semi-Classic in the stall-work.

The carving has been admirably executed by Mr. Hitch, of Harleyford-road, Kennington.

The builders are Messrs. J. Shillitoe & Son, of Bury St. Edmunds.

The organ is by Mr. August Gern; and the two organ-cases by Mr. Robinson, of Broad-street, Bloomsbury.

The architect is Mr. W. D. Caröe, M.A.

BILLIARD ROOM.

AN addition to a mansion, about 58 ft. long by 40 ft. wide, was designed by Mr. George Aitchison, A.R.A., to provide an additional drawing-room and this billiard-room on the ground-floor, and two stories of bedrooms above, and was occupied at the end of last year.

The decoration of the drawing-room, including the ceiling, was given in this journal on Nov. 24, 1888, and we now give illustrations of the billiard-room.

The owner had purchased some old carved oak panelling, including a chimney-piece, said to have come from a French château, and, to adapt these to the room, new panelling, over-doors, and window dressings had to be designed and carved. The large and very high chimney opening was reduced by means of a specially-designed chimney-piece in Bleu Belge marble, inlaid with Irish green.

The ceiling, in plaster, which we illustrate, was designed to accord with the room.

The walls above the panelling are hung with Japanese leather paper, the ground of which is cream colour, with the pattern in greenish gold, and the cornice is painted and gilt to match.

The floor is of oak, with a black parquetry border inlaid with white.

The drawings from which the illustrations are taken were hung in the Architectural Room of the Royal Academy exhibition this year.

SKETCHES FROM THE MARSHLAND CHURCHES.

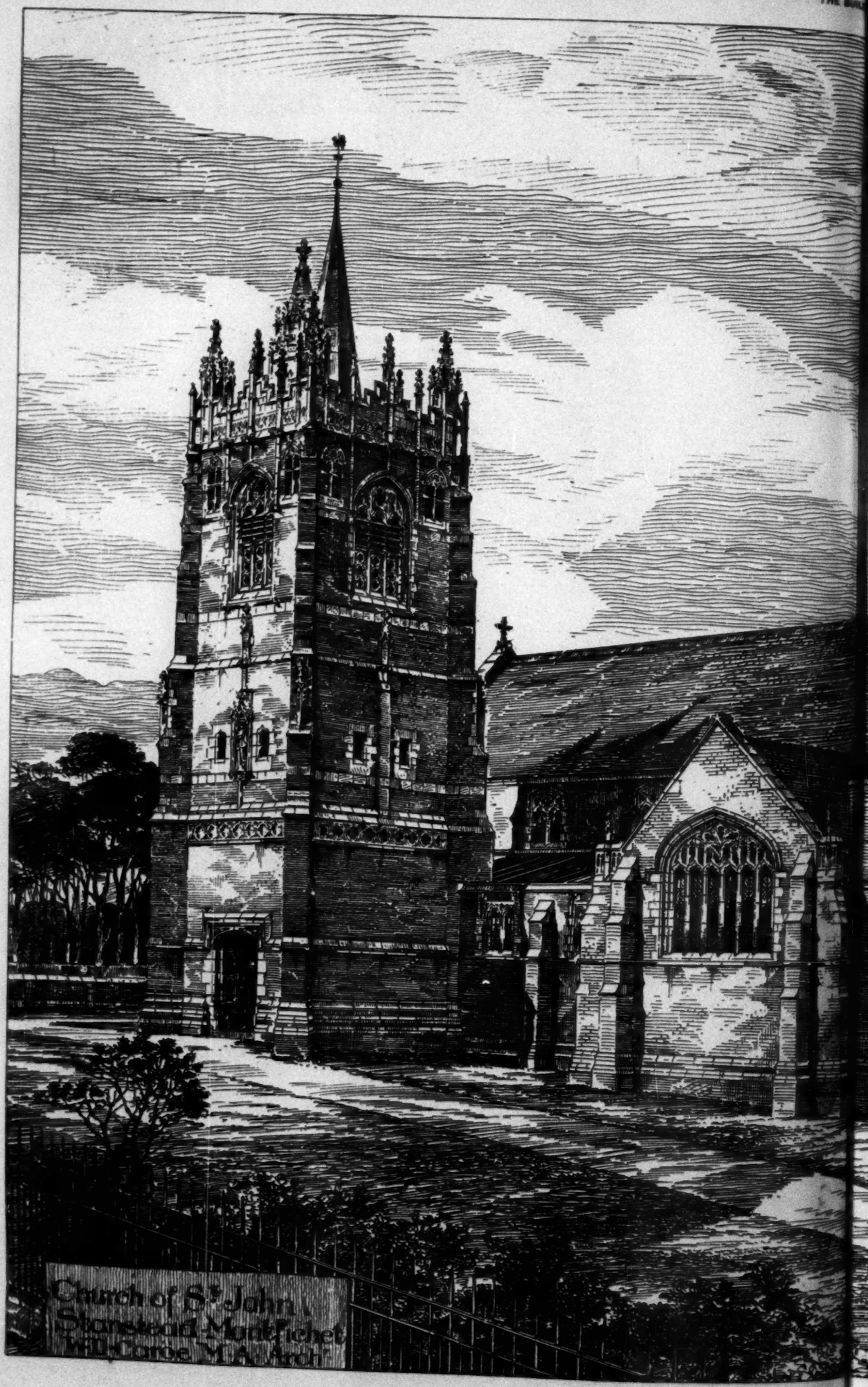
THESE sketches of detail from the churches of Walpole St. Andrews, and St. Margaret's King's Lynn, are a portion of some illustrations which Mr. Arnold B. Mitchell kindly placed at our disposal some time ago, to illustrate an article which we published on the architecture of the Marshland churches. There was not space to publish the whole of these illustrations at the time; and as attention is being directed to the ancient architecture of this part of the country just now, by the excursions in the district of the Archæological Institute and the Architectural Association, we give them here as contributions towards the illustration of the subject.

HAUTBOIS HALL.

THIS Hall is an interesting example of the brick architecture of the north of Norfolk,—the locality now principally being visited by the Royal Archæological Institute.

The house and the farm-land attached forms "Warner's Charity," and the income derived therefrom is administered by the Norwich Charity Trustees for the benefit of the poor of the parish of St. Peter-per-Mountergate.

By a provision in the will, the property would



Church of St John,
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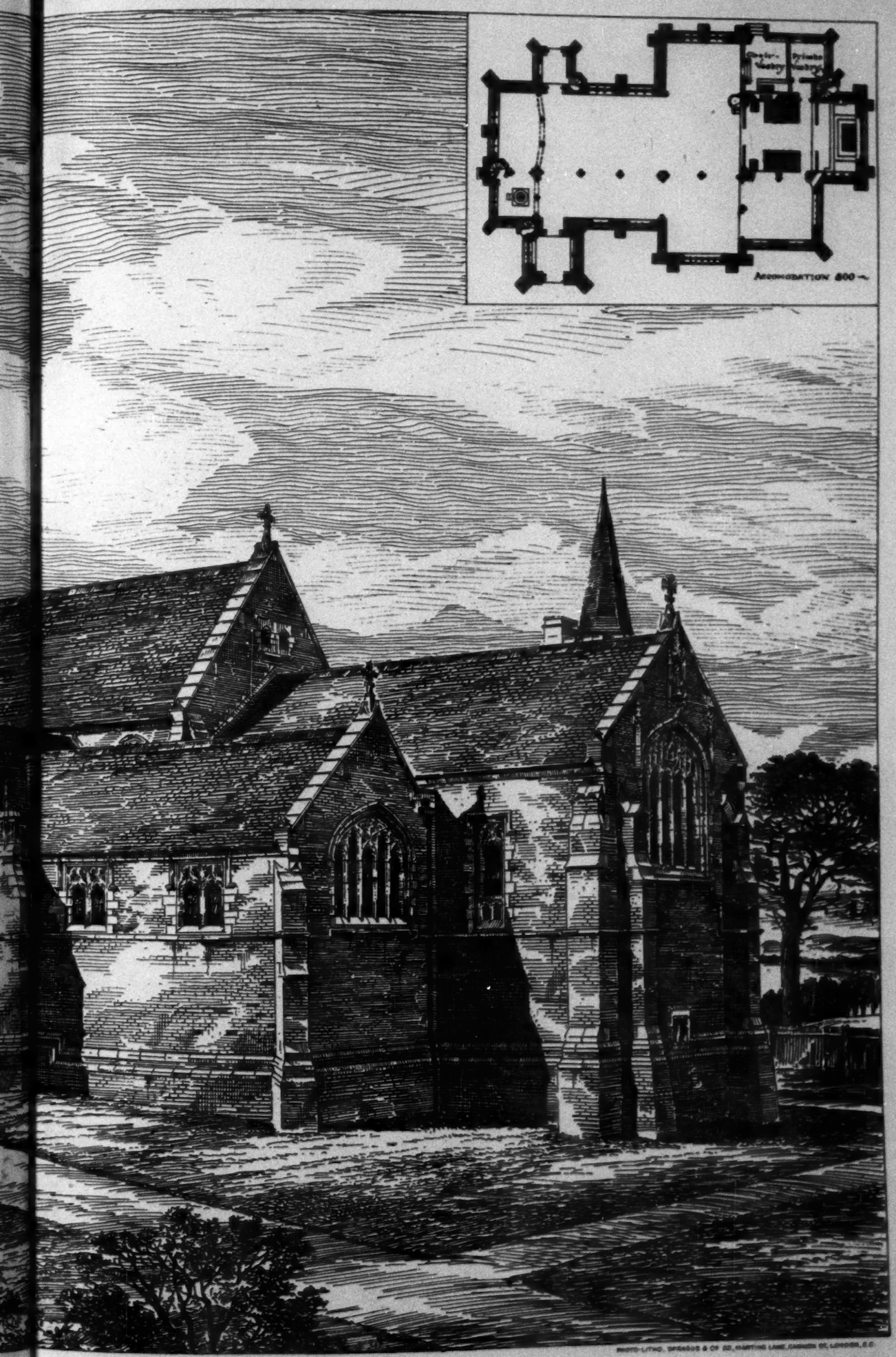
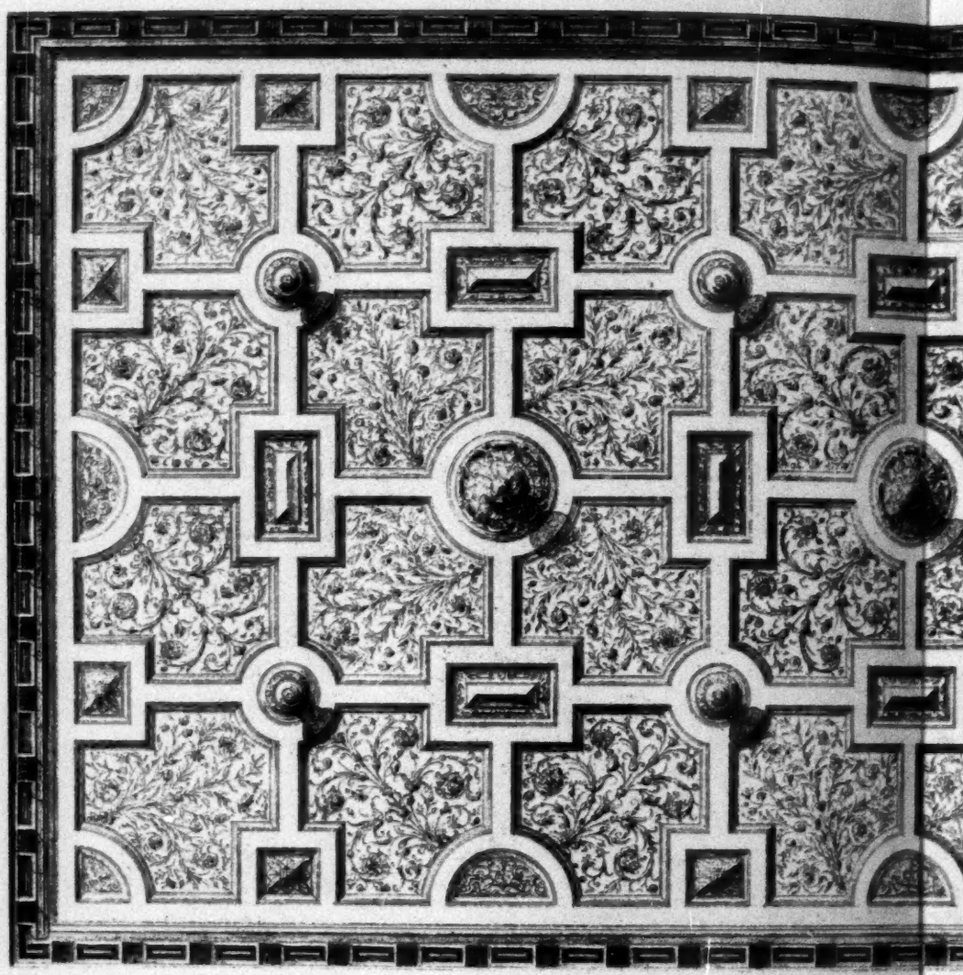
Wilcombe Y.A. Arch.


Accommodation 600

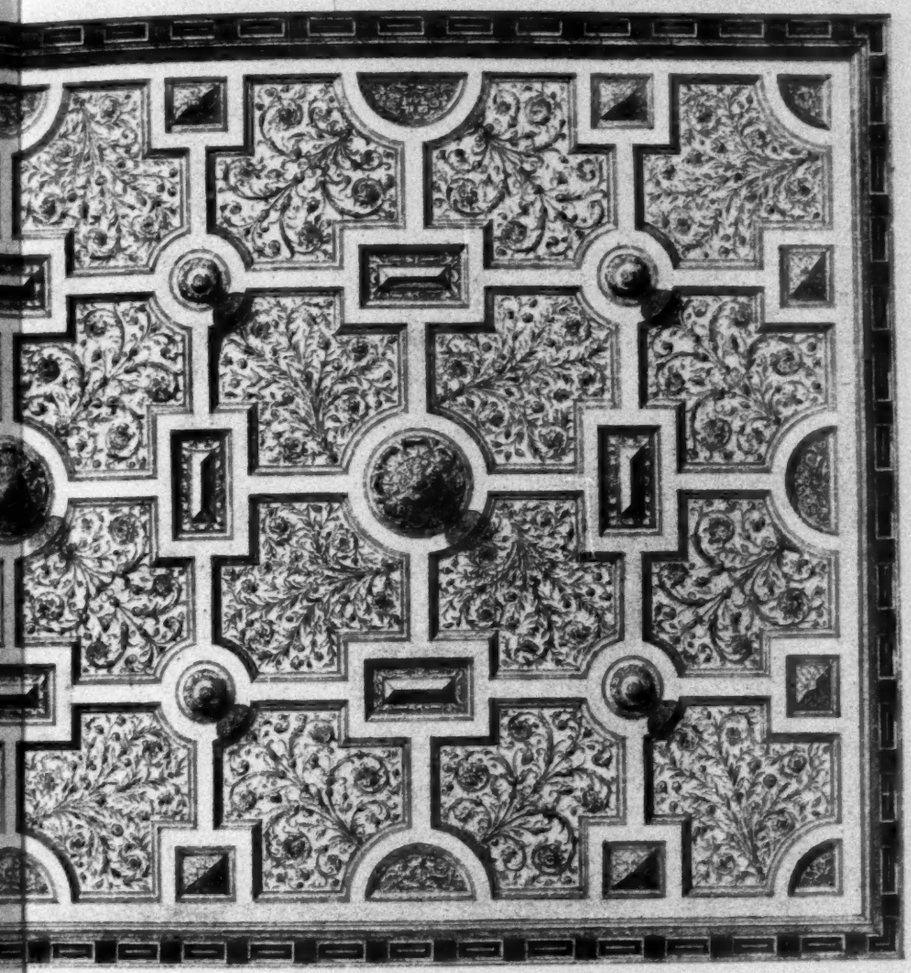
SECTION OF CEIL



CEILING.

DESIGN FOR DECORATION OF A BILLIARD

OF CEILING.



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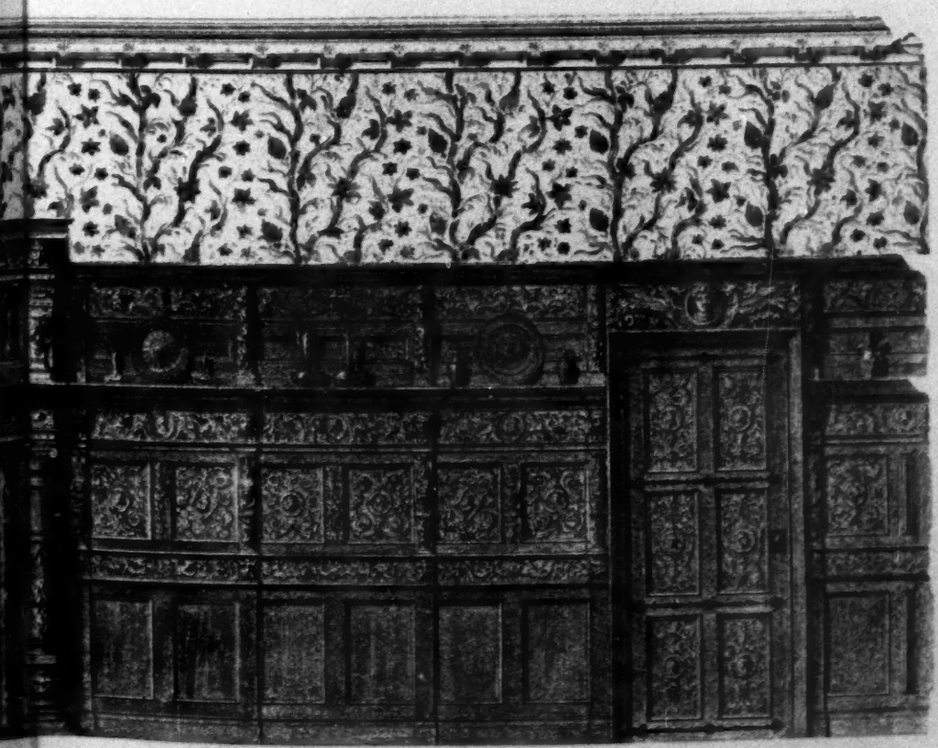
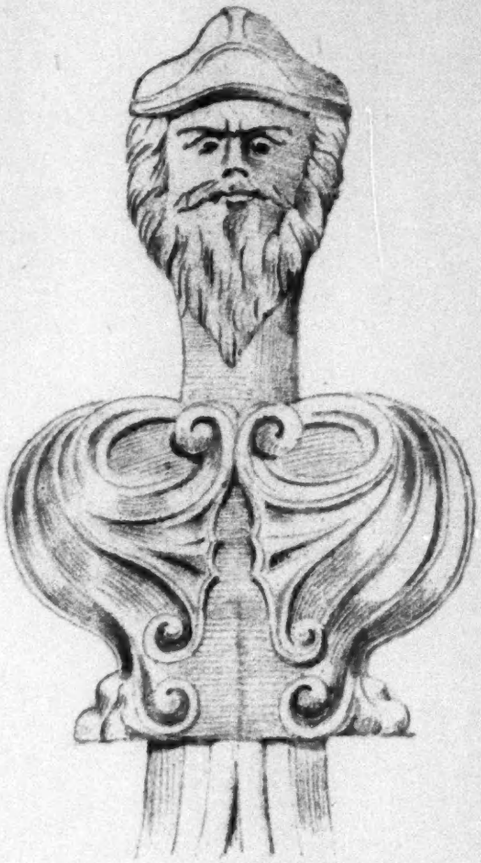


LLIARD ROOM.—By Mr. G. Aitchison, A.R.A.

HAUTBOIS HALL, NORFOLK.—From a Drawing by Mr. G. J. Skipper, F.R.I.B.A.

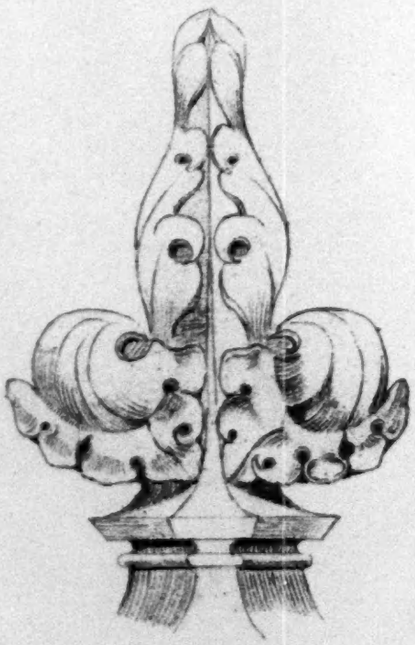
HAUTBOIS HALL, NORFOLK.—From a Drawing by Mr. G. J. Skipper, F.R.I.B.A.

A BENCH END.



A BENCH END.

ST. MARGARET'S.—KINGS LYNN.



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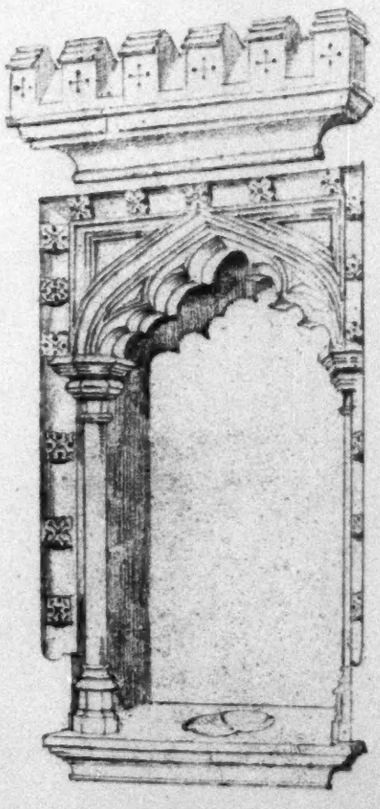
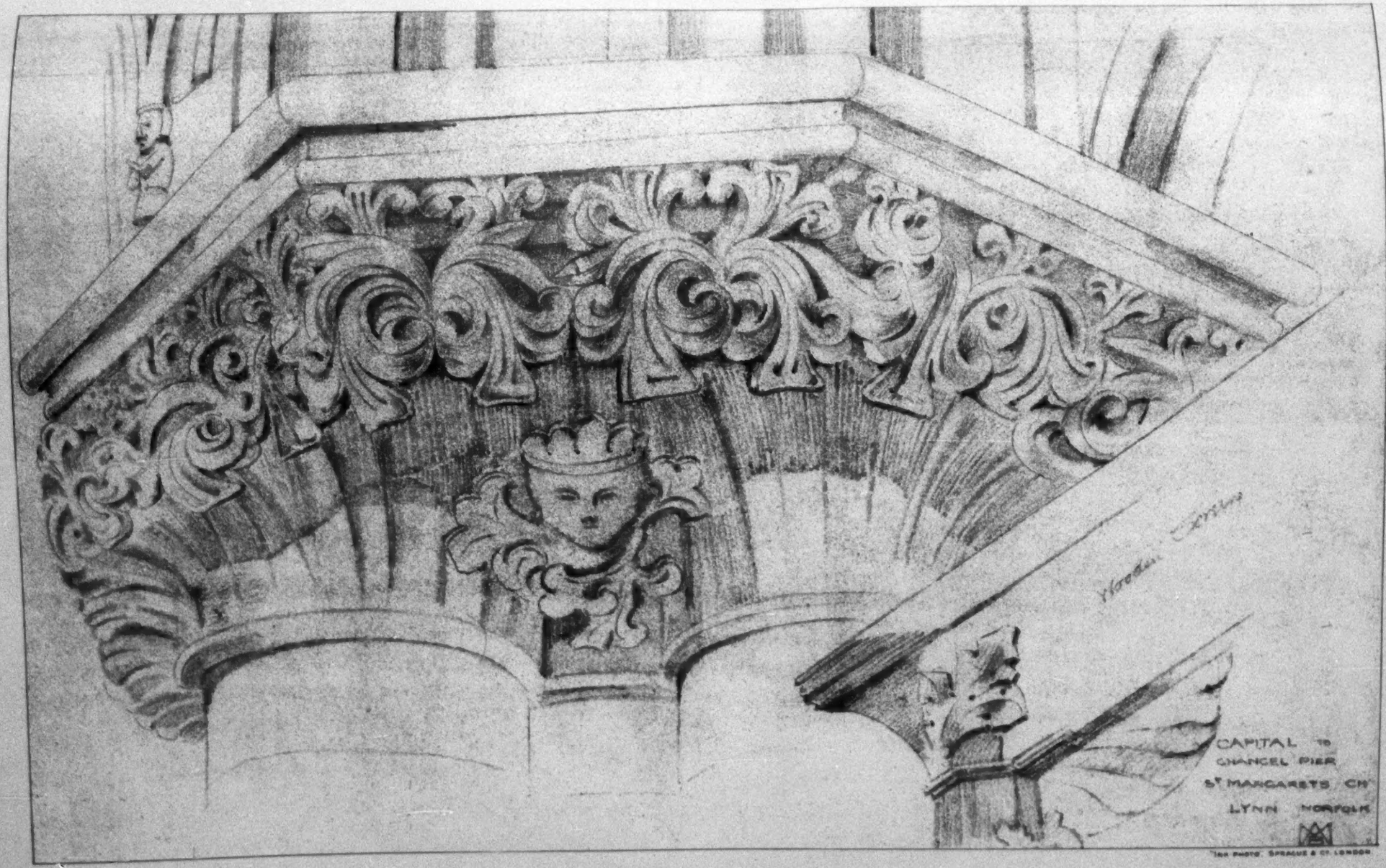


PISCINA.

WALPOLE, ST. ANDREW'S.

"INK-PHOTO." SPRAGUE & Co LONDON.

SKETCHES FROM THE MARSHLAND CHURCHES OF NORFOLK.—By Mr. Arnold B. Mitchell, A.R.I.B.A.



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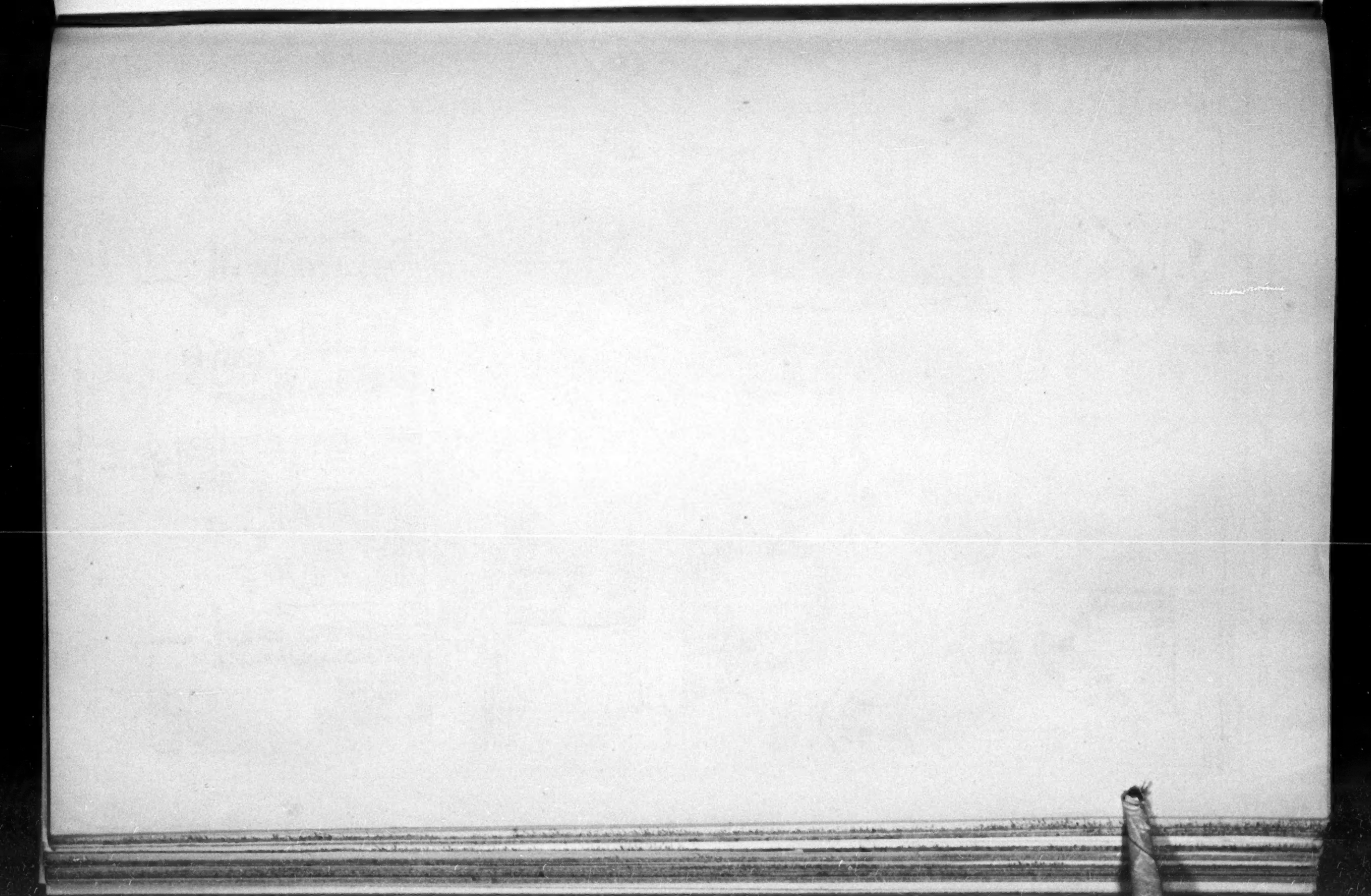
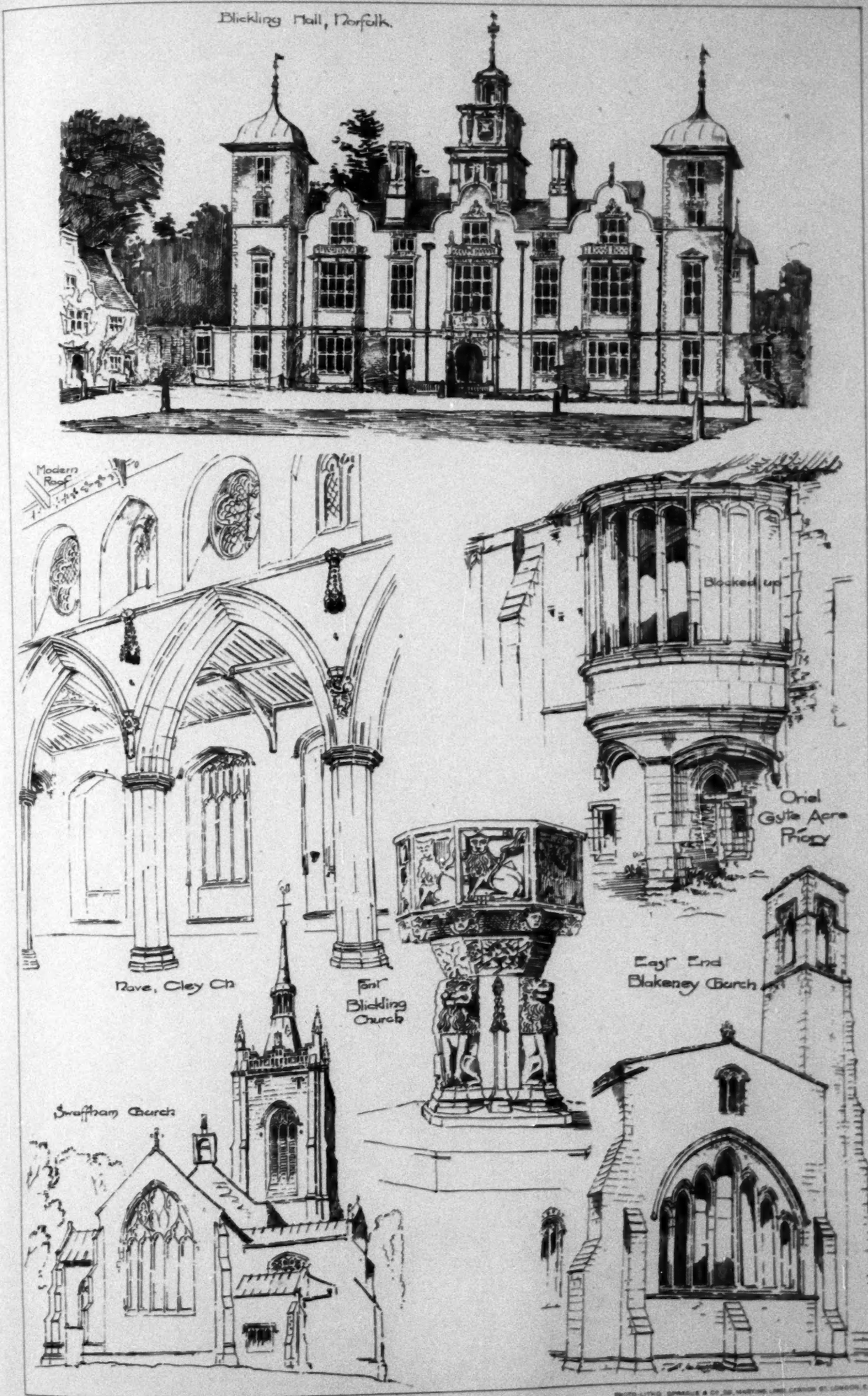




SKETCHES ILLUSTRATING THE MEETING OF THE ROYAL ARCHÆOLOGICAL INSTITUTE.

pass into the hands of the Corporation of Great Yarmouth if the present trustees allow it to fall into dilapidation.

The building is a conspicuous object on the left-hand side of the railway, between Cottishall and Buxton-Lammas stations, over the route to be taken by the Society on Monday next.

GEORGE J. SKIPPER.

SKETCHES ILLUSTRATING THE MEETING OF THE ROYAL ARCHÆOLOGICAL INSTITUTE.

THIS sheet of sketches, illustrating a few of the objects of interest visited this year by the members of the Institute and their friends, will add some interest to our account of the proceedings. It is reproduced from tracings of pencil notes by Mr. Walter Millard and Mr. Leonard Stokes that were kindly placed at our disposal for the purpose. The sketches that accompany our account of the meeting at Lincoln of the British Archæological Association are similarly reproduced from tracings of sketches by Messrs. L. Stokes, W. H. Bidlake, and F. Hooper.

THE ROYAL ARCHÆOLOGICAL INSTITUTE AT NORWICH.

THE members of the Royal Archæological Institute commenced, on Tuesday, their Congress,—or annual meeting, as they prefer to call it,—in the ancient City of Norwich, where they had held one of their earliest congresses in 1847, just forty-two years ago. Of the persons who took part in that Congress, few, alas! now survive. The Marquis of Northampton, who was then its President, has passed away; so also have Dr. Stanley, then Bishop of Norwich, and his still more celebrated son, Dr. A. P. Stanley, Dean of Westminster. Gone, too, are Mr. Albert Way, Mr. Henry Hallam, Mr. J. H. Markland, Lord Talbot de Malahide, Mr. John Henry Parker, Mr. Matthew H. Bloxam, Dr. Guest, Professor Willis,—and, indeed, all excepting two or three of the members present on that occasion.

The city also, so grand and picturesque, is scarcely as interesting now—externally, at least—to the antiquarian student as it was when the late Lord Northampton occupied the Presidential chair of the Institute. It still, indeed, shows many signs of its former grandeur,—remains of a day when it was the second or third town to the south of the Trent, rich in its manufactures and its commerce, as more recently it became rich in schools of art and literature; and even now, though it can no longer boast of its "old" and "young" Crome and its Cotman, its Opies, Martineaus, and Taylors, it can reckon amongst its residents or neighbours representatives of the Gurneys, the Buxtons, and the Clarksons, and of others who joined in the crusade preached by William Wilberforce against the horrors of the African slave trade. Architecturally, however, though much has been done to improve the streets and the housing of the working classes, it may be doubted whether Norwich is now as interesting to the archæologist and antiquarian architect as it was when our Queen had sat only ten or twelve years on the throne. However, the city was chosen this year, not unadvisedly, as the place of meeting; and, to judge from the first two or three days of the Congress, not without good promise of satisfactory results, the Mayor and Corporation of the city and the local gentry, and the Norfolk Archæological Society, having all combined their forces with a view to this end.

On Tuesday, in fine weather, varied with occasional showers of rain, the annual meeting was opened in St. Andrew's Hall, Norwich. The President of the Institute, Earl Percy, was unable to be present, being detained in London by his political duties; but the Duke of Norfolk, as President of this year's meeting, made an excellent substitute, and everything went smoothly and pleasantly. The walls of the grand old hall never looked more gay and bright, hung round as they were with flags and banners and flowers. As soon as the clock struck at noon, the Mayor, Mr. J. F. Ranson, the Deputy-Mayor, Mr. Harmer, and the Sheriff, Mr. G. White, proceeded in their robes from the Guildhall, preceded by their mace-bearer, and followed by their brother aldermen and town councillors. Having taken his seat, the Mayor expressed, in a brief speech, the pleasure which it caused himself and his brethren to welcome so distinguished and learned a body within that ancient and historic city. The city had always been loyal to old traditions, and on this occasion he believed its citizens would not be likely to be found wanting in hospitality. Both Norwich and the entire county of Norfolk were as rich as most, perhaps richer than many, parts of England in ancient memorials well worthy of attentive study. It is true that Norwich is not now the second or third city of the kingdom, as it was in the days when the Huguenots, expelled by Louis XIV. from France, brought to it the art of manufacturing those textile fabrics for which it was so famous in the days of our grandparents, the greater part of that industry having retreated into the northern counties. Still, however, enough remained to show at least the former greatness of the city, and to interest those who, like the members of the Archæological Institute, were of necessity zealous students of the past. His Worship ended his speech by an expression of regret at the absence of Earl Percy and of Sir F. Boileau, who, like his father before him, was a great admirer and student of ancient buildings and institutions.

At the close of the Mayor's speech, Mr. J. T. Micklethwaite, F.S.A., as the senior Vice-President who was present, made a brief speech, touching on the great archæological interest of the district which he and his friends were about to visit,—a district famed for the splendour of its churches and its monastic institutions, which was the result, doubtless, of its devotion to commerce, and to manufacturing and agricultural industries. He ended by presenting the Duke of Norfolk to the Mayor as the President Elect of the meeting, and by vacating the chair in his Grace's favour.

The cheering with which the Duke of Norfolk's name was received was doubtless all the more hearty, since his grace's appearance as President of the Norwich meeting was regarded by the good people of the city as a step towards the reconciliation of an ancient feud which, a century or more ago, had led one of the Duke's ancestors to abandon the palace of the Howards at Norwich as a residence, and to settle down in Sussex instead of in the county from which they derived their title, and in which they once were resident landholders. The Duke said that while he felt it both an honour and a pleasure to act as President of the Institute for the week, he could not feel that he was entitled to put himself in the position of one who understood the topics to be considered, so well as many of those gathered before him. He had come to learn, not to teach or preach. His first duty was to return thanks to the Mayor for the welcome he had given him to that ancient and interesting city. It was a pleasure to all the members that the civic chief of Norwich had met them so cordially, and to find that the Corporation and the inhabitants of the city appreciated the selection of Norwich for this visit. The last visit of the Institute to Norwich was in 1847. That was a very interesting visit. But there was one element connected with this visit that ought to make it more interesting; for nearly another half century had passed away to give a greater antiquity to the buildings than they had in 1847. All must feel when travelling about the country a very keen regret at seeing how much destruction had taken place among our ancient monuments and records, how decay was continually further impairing them, and how things which ought to be carefully chronicled were slipping into oblivion. That arose very much from the ignorance prevailing in the localities—from a want of knowledge as to what was interesting, and a want of appreciation of local traditions and monuments. It was therefore extremely profitable to localities that congresses of this kind should be held in them, and that they should be visited by persons who were really masters of such subjects. Such visits must give special encouragement to local antiquaries, who devoted much of their time and attention to such topics, but very often found it difficult to stir up sufficient interest in them amongst those living around them. As their work was often made much harder through discouragements of various kinds, local antiquaries, he thought, should feel encouraged when people from all parts of the country came to comment on their local monuments. Then it was a greater benefit to visitors to come amongst local antiquaries. Though it was possible to grope among relics of the past and try to learn what there was to be learned, yet it was impossible to know and fully to understand their special characteristics unless they had guides better instructed than themselves. Thanks were therefore specially due to those on occasions of this kind brought before them the result of the labours of many years, so that they might share in the discoveries and in the interesting observations they had made. Without such aid it was impossible to study history with advantage. They might waste their time in looking for things in places where they were not to be found, and miss that which should rivet their attention. It was gratifying that Norwich should have been selected for this meeting, as it was one of the cities rich in ancient records especially relating to the municipality. It had been only too carefully impressed upon all their minds how great an interest there was in the question of local government. That being so, it was interesting and instructive to search the records of the past relating to that question, and to see what lessons could be derived from them. Norwich was especially fortunate in this respect, for it had very valuable records, and Mr. Hudson had shown zeal, energy, and ability in elucidating them. He also noted with pleasure sundry inquiries which had been made into the monastic life of the past, a subject which had been much neglected. It had been too often approached in a spirit of prejudice, though it was one which commanded, and would repay, careful study. Perhaps the greatest incentive to popular interest in this matter was the very able paper lately published by Dr. Jessopp on "Daily Life in a Mediæval Monastery." That paper had created great interest and sensation, and, no doubt, had tended very much to direct the minds of people to the subject. Then Mr. St. John Hope had been unearthing the buried remains of many monasteries, so that the ground plans now might be compared with the statutes and other written documents. This had been fruitful of happy results in showing what really was the daily life in monasteries. It was right and fitting to take a special interest in the subject, because it was very much owing to the inmates of monasteries handing on the torch of learning that we are now able to acquire knowledge.

It was not to be expected that the members of the Institute would leave the great hall, of which Norwich is so proud, without desiring to hear some account of its history. This was supplied by a local antiquary, Mr. Mottram, who told the meeting how it had once been the nave of a Dominican Church, and how the brethren of the Order of St. Dominic, on coming to Norwich in the thirteenth century, settled in Norwich on the north side of the river, close to the church of St. John the Baptist. The "Brethren of Penance" not long afterwards settled on the south side of the river in Hungate, where they built a chapel or oratory. This Order, however, offended the Pope, who dissolved them, and the Black Friars, as the Dominicans were called, obtained their possessions. During the time when the influence of the Lollards was growing in Norwich, the Black Friars made efforts to build a grand and large church; and, to carry out their plan, it was necessary they should acquire possession of a lane which ran from Bridge-street to Elm-hill, and the line of which would run obliquely from the west to the east end of the church. Their efforts to obtain possession of this lane met with strong opposition from the citizens. A fire destroyed part of the church and conventual buildings early in the fifteenth century, so that the friars had to return to their old quarters. It was after this fire that the church, now St. Andrew's Hall, was rebuilt. Robert de Erpingham, a brother, devoted his patrimony in helping to build the fabric, and the shield of Erpingham is displayed between the windows of the southern clearstory. Sir Simon de Felbrigg, standard-bearer to Richard II., who, with his second wife Katherine, is buried in the church, though his brass is at Felbrigg, contributed to the building of the octagonal central tower, which fell in 1727.

Mr. Micklethwaite next pointed out that the churches of the Friars Preachers were more or less public, and designed for public preaching. Being wanted for use they were planned very like the parochial churches. The nave was the great auditorium. The friars held their own private services in the choir (recently used as the Dutch Church and now called Blackfriars' Hall), which was nearly cut off from the nave. The choir was almost as separate from the nave in the Middle Ages as now. Although based upon the plan of most Benedictine monasteries,

the conventual houses of the friars differed from them. With the friars the cloister was not the living-place as with the monks, who had no cells, while each friar had his separate chamber. The south side of the church was built earlier than the north side. The south windows, as Mr. Micklethwaite pointed out, are Decorated, while the north are Perpendicular. The fine east window, in the choir, is of the Decorated date. It may be added that some of Friar Brackley's letters in the Paston Correspondence were written from this convent. A perambulation was made of the church, choir, and conventual buildings, which undoubtedly owe their preservation to the citizens of Norwich having persuaded Henry VIII. to sell them for a consideration as a civic hall.

A start was next made for the Cathedal, where a large gathering took place in order to hear Prof. J. Willis Clark, of Cambridge, open the Architectural Section by a lecture on the structure and history of the Cathedral, which was illustrated by a series of diagrams, ground-plans, and elevations (prepared for the 1847 Congress by his uncle, the late Professor Willis), which hung on the walls. The first portion of this lecture was delivered in the middle of the nave, the rest being reserved for delivery as the party walked round the various parts of the building. We condense the following account of the lecture, with corrections, from the *Eastern Daily Press*. He claimed for this structure that it stands almost alone among the cathedrals of England as a purely Norman one, with no suspicion of any admixture of Saxon work, and with little alteration in later times. Nearly seven centuries have elapsed since its foundation by Bishop Herbert, who transferred the see from Thetford to Norwich in 1096. According to the Registrum of Binham, being anxious to settle his cathedral in some sure place, he purchased a certain spot near Norwich Castle, called Cow Holm, a pasture belonging to the manor of Thorpe, close to which is Holm (now Bishopsgate) street. This acquisition was confirmed by King William Rufus. To secure free egress and ingress from and to his own grounds and church and the dwellings of his monks, Bishop Herbert obtained in exchange from Roger Bigod, Earl of Norfolk, his palace in front of the gate of the monastery, together with lands in St. Michael on Tombland, where was a chapel that was removed to another site, while the spot where it had stood was marked by a cross. The palace at that time was at the south end of Tombland; the cross was erected opposite the Carnary (now the Grammar School). In 1319, Edward II. granted Bishop Salmon leave to increase the site of his palace. Bartholomew Cotton, a monk of the Norwich convent, author of a good deal that is recorded in its "Registrum Primum," says that Herbert finished the cathedral in his lifetime as far as the altar of the Holy Cross, called in Cotton's time the altar of St. William, which stood a little to the west of the existing central screen." Cotton says that Herbert also built the episcopal palace, except the great hall. The work was begun in 1096 at the place where in Cotton's time stood the early English chapel of St. Mary, beyond the present semicircular eastern wall of the church. Herbert died in 1119, and was buried in the church in front of the high altar. He was succeeded by Bishop Eborard, who, loving the monks at Norwich with great affection, began the work where his predecessor had left it, and completed the nave. Eborard died in 1146. During the episcopacy of William Turbe (in 1171) the church was almost destroyed by an accidental fire. On this occasion the Bishop made a vow that he would not go any further than twelve leagues from his church, unless compelled by absolute necessity, until it was rebuilt. Sometimes he sat in a chair at its door, asking for contributions. In two years the church was repaired, and the Bishop died. His successor, John of Oxford, is said to have built the infirmary of the monks, and to have remitted the tax imposed by Herbert on every messuage in the diocese for building the church. In other words, this Bishop wound up the building account. This completes the history of the Norman church, the erection of which had occupied the best part of a century. As to the conventual buildings, Bishop Herbert is said to have built the dwellings of the monks, and John of Oxford the infirmary. The outer wall of the cloister is Late Norman; the inner wall is of later date. The chapter-house stood on the east face of the southern transept, and between it and the transept was, a few years ago, a passage called the Slype. The foundations of the chapter-house have been excavated, when there was discovered a semicircular apse. Thus it appears that there must have been a Norman chapter-house,* which was rebuilt or much altered by those who built part of the cloister. Immediately above the east cloister walk was the "dorter" or "dormitory" of the monks. On the south side of the cloister was the "fratery." There remains of it a beautiful range of Norman windows. At some distance south are the ruined columns of the "infirmary," which was pulled down in 1806. At the west end of the south side was the kitchen, and alongside it the "guest hall." A detached belfry stood just within the original monastery gatehouse, close to the site of the Erpingham Gate. Between 1245 and 1258 Bishop Walter de Suffield took down the Norman Lady Chapel, and replaced it with a new one, and all that remains of the Early English chapel that was pulled down by Dean Gardiner in the reign of Elizabeth, is the beautiful pointed arch of its doorway. The great Riot of 1272, continued the Professor, was a very important event in the Cathedral's history. He quoted from the best authorities in order to give a history of this riot, which, he said, is fully and well told by Mr. Walter Rye in his Antiquarian Miscellany. The accounts of this riot, he added, are curious and valuable as illustrating the state of feeling between the laity and secular clergy on the one hand, and the regulars on the other. Ill blood arose between the monks and the citizens after the setting up of a quintain by the latter on Tombland. In a general scuffle which followed, the prior's retainers were driven within the monastery gates. A multitude of citizens defied the prior. One of them was shot and killed, and, as the City Coroner found the prior's men guilty of murder, the citizens were excommunicated. Subsequently hostilities were renewed. Prior Brunham then brought from Yarmouth, in three barges, armed men, who marched into the city, sounding trumpets and beating drums. They robbed and set fire to some houses. The city authorities complained to Henry III., who was at Bury St. Edmund's. On August 5 a considerable force of citizens and fifteen clergy and chaplains came together, and, according to one account, attacked the Priory, while another said that the people outside were shot at and slain by mercenaries in the belfry. Finally, the south-western gate of the monastery and the Church of St. Ethelbert were destroyed. Then the west gate was forced, the belfry caught fire, and the flames spread to the church. Whatever could be burned was burned, with the exception of a single chapel. The citizens were condemned to pay 3,000 marks towards the rebuilding of the church and monastery. A jury at the inquisition found that the fire in the belfry was caused by the carelessness of those mercenaries who had defended it. Six years after this disaster, Bishop William de Middleton dedicated the church (as that had never been done) in the presence of Edward I. and many nobles. No important event in the history of the church occurred thenceforward till 1362, when England was visited by a violent hurricane, which greatly damaged buildings in various parts of the country. Bishop Percy gave 400 marks out of his own treasury to repair the presbytery, which had been thrown down by the great wind, and obtained subscriptions from the whole of the clergy in his diocese. Bishop Alnwick marked his incumbency by erecting the great west window, similar in design to that in Westminster Hall. In 1463, during the episcopacy of Walter Lyhart, there was a third fire, the accounts of which are meagre. The chancel was struck by lightning, and was partly burned. Lyhart was buried in the nave in front of his new work called the reredos, remains of which Mr. Willis Clark subsequently pointed out in the easternmost bay of the nave against the screen. Then a fourth fire took place in 1509, when the roof of the north transept was burned. Then Bishop Nix vaulted it with stone. In the cathedral were practically two churches, that of the citizens, and that reserved for the monks. Bishop Herbert left a cruciform church, the transept of each having a chapel on its eastern face. There is a processional path along the whole, with curious circular chapels with semicircular apses on their eastern faces on each side of the cathedral, called, that on the north, the Jesus, and that on the south St. Luke's chapel. Bishop Eborard finished the central nave, and his work extends from the twisted pillars to the west end of the church. The central tower is Norman, but as to when it was built there is no direct evidence. A wooden spire was built between 1291 and 1297, at a cost of 248*l.*, and that would be the spire which was broken down in the great storm of 1362. Blomefield asserts that Bishop Goldwell finished beautifying the tower, which might or might not mean also that he added the spire. The Norman nave had a wooden roof, but that was probably destroyed by the fire of 1463, for the stone vaulting is due to Bishop Lyhart, whose device recurs among the bosses. Passing next to the choir, or, as it is locally called, presbytery, the Professor asked, Who built that beautiful work which forms the eastern limb of the church? Bishop Goldwell made the stone vaulting, because his device is upon it, and put up the flying buttresses to carry it. But who built the walls? Goldwell probably did not. There was an uniform tradition that this was the work of Bishop Percy. When the wooden campanile fell in 1362, could it have damaged the walls so completely as to render it necessary to rebuild them? Would it not rather damage the roof? Professor Willis never could arrive at any definite conclusion as to the accuracy of this. There is a wooden roof above a stone one that might well have been built in Percy's time. If the view were accepted that the walls were built by one of Percy's predecessors the only one who could be selected was Bishop Middleton, who repaired and restored the church.

A perambulation was then made of the choir and presbytery, most of its objects of interest being pointed out by Mr. Willis Clark. He drew especial attention to the comparatively recently discovered Mediæval painting of the Passion, which had since the Reformation been used as a table. But the most curious relic in the cathedral he pronounced to be the ancient episcopal throne, which is of stone, and is situated in the easternmost bay of the presbytery. He directed attention to the remains of the elbows of the lofty stone seat, and showed where in the adjoining bays there are the remains of a concentric arrangement of seats for the clergy. Thus, the Bishop sat high above the clergy, who were arranged in two or three tiers on either side of him, and looked over the high altar down to the west end of the church. This is the only stone throne of a bishop known in England. There are two on the Continent, one at Torcello and another at Aquileia in Italy; but no others are known to exist except in Rome.

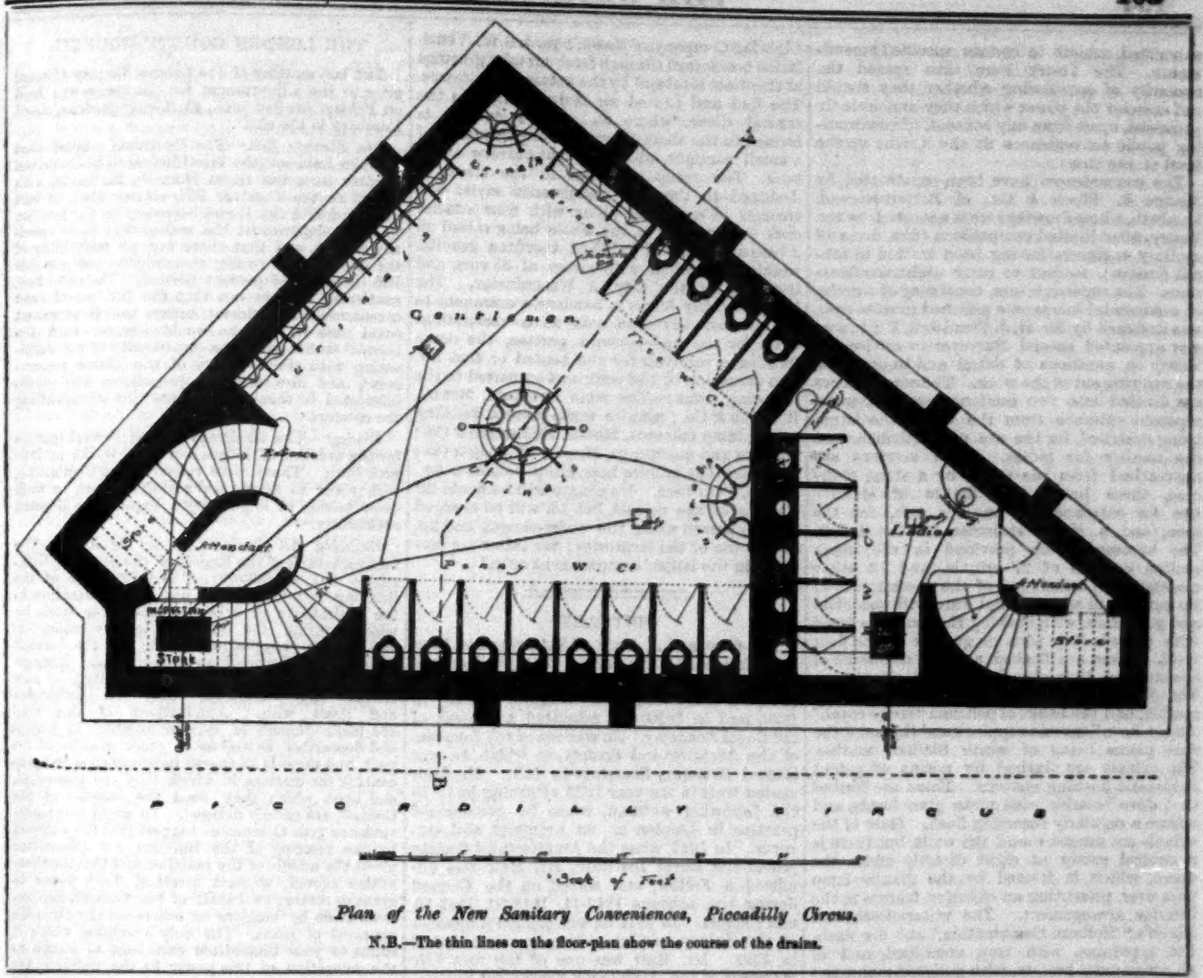
The Professor having concluded his lecture, the Rev. Mr. Sewell pointed out a sealed altar in the Jesus Chapel. The altar slab, which rests on five columns, has let into it a square piece of marble, with the cross incised in several places. It was customary from the time of the Council of Calcedon to deposit relics, three particles of the Holy Eucharist and three grains of incense in the cavity or sepulchrum of an altar. That was probably done in this case, though when the seal was raised in the presence of the Cathedral dignitaries, nothing was found within it. Probably the relic, which originally was very small, had wasted and crumbled away as to be no longer discernible.

We will continue our report next week.

* The site of the walls of this ancient relic, lately discovered, were pointed out to the members of the Congress by the Professor.

The Corinth Canal.—The work upon the Corinth Canal is still almost at a standstill, one section being only proceeded with. The contractors have received no payment since the suspension of the Comptoir d'Escompte, and their claim now amounts to 800,000 francs. They are, however, willing to continue the work provided they obtain a share in the canal, but this cannot be arranged, as the canal is already mortgaged. However, the prospects of the work being resumed are not unfavourable, inasmuch as the Greek Government seems disposed to support the undertaking, for which purpose an engineer has examined the canal and furnished a report, setting forth the time and money required for its completion, but as yet the Government has arrived at no decision.

Technical Grants in Norway.—The Norwegian Government has granted six architects and technologists various sums of money in order to carry out certain studies abroad, as, for instance, in England the study of the heating of dwellings, construction of hotels, &c.



Plan of the New Sanitary Conveniences, Piccadilly Circus.

N.B.—The thin lines on the floor-plan show the course of the drains.

NEW SANITARY CONVENIENCES, PICCADILLY-CIRCUS.

On Tuesday last the Vestry of the Parish of St. James, Westminster, afforded a private view, prior to the public opening on Wednesday of the new conveniences for both sexes which that body has, with commendable public spirit, constructed at Piccadilly-circus, beneath one of the triangular plots of land hitherto unappropriated to any purpose. We give a plan of these conveniences, from which, and from the following description, it will be seen that they are on a larger scale and more luxuriously provided than any others of the kind in London. One admirable feature about them is that they are well provided with daylight through the glass lights in the pavement. The following is the official "history" and description of the works:—

"The conveniences at Piccadilly-circus, which are to be opened to the public on Aug. 7, have been constructed by the Vestry of the parish of St. James, Westminster, at a cost of about 3,500*l*. The Vestry have for many years past felt the necessity of increasing the number of public urinals in the parish, and as the district is yearly becoming less residential in character, accommodation of the kind is more and more needed for the growing number of people brought into the neighbourhood for business purposes. It is probably generally agreed that the number of public urinals in most parts of the metropolis is totally inadequate to meet the requirements of the present population, and there is also a general consensus of opinion that, whatever may be an appropriate site for such a structure, any position which may be selected is the most objectionable site that could be chosen—from the point of view of residents in the immediate vicinity. Within the last ten or twelve years many projects for increasing necessary accommodation have been formed, and the majority of them have been abandoned in deference to the strongly-expressed dissent of neighbours. In one case, indeed, as recently as 1879, the Vestry disregarded the opposition of the residents and erected a public urinal in Old Burlington-mews, deeming the objections that were taken to the proposal to be without good foundation. An undoubted nuisance existed on the very spot selected for the urinal, and it appeared to the Vestry desirable, alike in the interests of decency and health, to provide a suitable structure. The inhabitants, however, appealed to the Courts of Law, and in the result succeeded in obtaining an injunction restraining the Vestry from continning the urinal, and throwing the costs of the proceedings (amounting to several hundreds of pounds) upon the Vestry. At various times proposals have been made to construct underground urinals in some of the larger spaces in the parish, such as Great Marlborough-street, by the Police-court and the Circuses, but on each occasion strenuous opposition was threatened, and the schemes were, with some reluctance, abandoned. It is obvious that public urinals are very largely used by strangers to the neighbourhood, and that, to be of the maximum benefit, they should, therefore, not be placed in obscure corners, but in such situations as not to require a prolonged search. At the same time, the natural prejudice against the construction of urinals in prominent positions on the part of ratepayers in the vicinity, who have to defray the cost of constructing and maintaining the conveniences, must be respected, and thus the action of the Vestry is considerably fettered. Signs are not wanting, however, that this prejudice is becoming weaker, and it is possible that in comparatively few years a well-appointed and carefully-attended urinal will be regarded as far less objectionable than a continuance of street nuisances. The Vestry believe that they have shown, in the case of the underground conveniences at Piccadilly-circus, that it is possible to make provision of the kind without offence to the eye or any other sense.

The construction of the conveniences at the Circus has been under consideration for some years. Before the new street, now known as Shaftesbury-avenue, was completed, the Vestry suggested to the Metropolitan Board of Works that advantage should be taken of the improvement to provide some such accommodation. On the 13th July, 1885, a deputation of the Vestry waited upon the Board with a memorial, praying that the space which is now enclosed with baulks of timber might be formed into an ornamental space, with perhaps a fountain or statue in the centre, and an underground urinal, with proper approaches, constructed under the same. No definite reply being received to this memorial, the Vestry again waited upon the Board in the following year, and requested to be allowed to utilise the space themselves in the manner suggested, if the Board were unable or unwilling to do so. It was not until nearly two years later (January, 1888), that the Vestry received an intimation of the views entertained by the Board on these two suggestions. They then learned that the Board had decided that, in view of all the circumstances, it was not expedient to comply with the request of the Vestry. The site first suggested was, as it still is, enclosed, but a triangular space to the east of the entrance to Shaftesbury-avenue had been paved and added to the street. It had thus, under the provisions of the Special Act of Parliament authorising the improvement, passed to the Vestry, and the latter at once intimated to the Metropolitan Board of Works their intention of exercising the powers conferred on them by the Metropolis Local Management Act, 1855, and of providing public conveniences on, or rather under, that site. The Board, in reply, intimated that they would oppose the carrying out of this intention, and brought pressure to bear upon the Commissioners of Woods and Forests, to whom the freehold of the ground would revert if the surface ceased to form part of the street, to prevent the construction of the conveniences. The Vestry freely recognised the propriety of deferring to the views of the Commissioners of Woods and Forests, and therefore approached Colonel Kingscote with plans of the proposed works, to which they sought the assent of the Commissioners. Some correspondence ensued, and ultimately the Vestry were gratified to learn that although Colonel Kingscote, in face of the objections taken by the Metropolitan Board of Works and a few occupiers of Crown property in the vicinity, felt bound to decline to give any approval of the scheme, yet as the Vestry appeared to be still of opinion that the conveniences were needed in the interests of the public, he would not farther oppose their construction in accordance with the drawings

submitted, subject to certain specified amendments. The Vestry were thus spared the necessity of considering whether they should not exercise the power which they undoubtedly possessed, apart from any consent, of constructing public conveniences at the Circus on the level of the street.

The conveniences have been constructed by Messrs. B. Finch & Co., of Belvedere-road, Lambeth, whose drawings were accepted by the Vestry, after limited competition (five firms of sanitary engineers having been invited to submit designs), subject to some slight modifications. The superstructure, consisting of a group of ornamental lamps on a polished granite base, was designed by Mr. H. J. Treadwell, F.S.I., who was appointed special Surveyor to advise the Vestry on questions of detail and to supervise the carrying out of the work. The conveniences are divided into two sections, each having a separate entrance from the street, the larger being designed for the use of gentlemen, and the smaller for ladies. Both sections are approached from the street by a stone staircase, there being two flights of stairs—one for entrance and one for exit, for the men, and a single staircase for the ladies. The accommodation provided in the men's section consists of 27 urinals, and 12 water closets. The urinals are of the most approved lip pattern, in white glazed ware with chocolate and gold lines, with flushing rims, and are fitted with patent drip pans or gutters at the floor level. These are flushed at every discharge of the cisterns, thus ensuring perfect cleanliness. The divisions are of polished natural "dove" marble, and the backs of polished "rouge royal," with "dove" marble cappings and skirtings, the foot pieces being of white Sicilian marble. The urinals are flushed by means of patent automatic flushing cisterns. These are formed in "dove" marble with plate glass fronts, and ensure a regularly recurring flush. Most of the urinals are ranged round the walls, but there is a central group of eight directly under the dome, which is formed by the granite lamp base over, presenting an effective feature in the interior arrangement. The water-closets are Finch's "Holborn Combination," and are flush-out apparatus, with trap combined, and of an ornamental pattern, with polished mahogany seats, which are fitted with balance-weights, maintaining the seat in a vertical position when not in use, and thus helping to ensure cleanliness. Each water-closet is provided with a three-gallon syphon flushing cistern of approved pattern connected to the apparatus with a 1½-in. lead pipe, and producing a perfect flush. The divisions between water-closets are single slabs of polished "dove" marble, and the fronts and doors are formed in pitch-pine with chamfered and moulded framing. Each door is provided with a patent indicating bolt, showing at a glance which closets are in use. The accommodation provided in the ladies' compartment consist of five water-closets and two lavatories. The water-closet apparatus provided here is of the valve pattern, with mahogany seats made in the usual form, excepting that they are made to open readily for cleansing purposes. The divisions and fronts match those in the men's portion. The two lavatories are fitted with white and gold oval basins of the best pattern, with polished "dove" marble lavatory tops, and mahogany fronts. In this division are provided two mirrors, brushes, combs, &c., the idea being to provide all necessary accommodation for ladies shopping or doing business in the West-end. The entrance at the foot of the staircase is carefully screened by a heavy curtain, and the railings at the pavement level are lined with ornamental iron screen-work, in order to secure as much privacy as possible. The structure will be completely shut in after closing hours by the Bostwick Company's patent gates fixed at the foot of each staircase. The walls generally are lined with best-quality white glazed bricks, and the ceilings are finished in Parian cement. The floors are laid with tiles of bright and ornamental patterns, by Messrs. Carter, Johnson, & Co., of Kennington-park-road. Light during the day is obtained by means of Hyatt's patent pavement lights, and through the openings in the dome formed by the granite base of lamp. The artificial lighting is at present by gas, the Wenham Company's patent lamps being used for the general area, and each w.c. being also supplied with a small burner. As soon, however, as the electric mains are completed in the vicinity (which it is expected will be within a few weeks), the electric light will be fitted and supplied by the St. James's and Pall-mall Electric Lighting Company, of Mason's-yard, S.W. Ventilation is obtained through fresh-air inlet gratings at the street level and by the entrance staircases. The foul and heated air is drawn up into the central dome, where an upward current is formed in the shaft of central lamp by means of a small sunlight, which is kept burning at its base. The group of lamps in the street is designed in the free Renaissance style, and consists of a central pillar with four smaller ones surrounding it, the whole being raised on a base and dome of polished Aberdeen granite, which is enriched with swags of flowers, and the arms of the City of Westminster. The lamp not only forms a handsome ornament to the Circus, but also acts as a ventilating-shaft for the underground portion, the dome forming a reservoir for the heated or foul air. The execution of the work was entrusted to the following firms:—The main structure, Messrs. B. Finch & Co.; granite work, Messrs. Fenning & Co.; lamp columns, Messrs. McFarlane & Co.; lanterns and gasfittings, Messrs. W. Sugg & Co.; and fixing the granite base, lamp columns, &c., Messrs. Peto Bros. No charge will be made for the use of the urinals, but 1d. will be charged to each person using the water-closets, and 2d. for the use of the lavatories; the latter are provided in the ladies' compartment only."

OBITUARY.

Mr. George J. J. Mair, F.S.A., who had been in failing health for several years, died on the 17th ult. Born at Aberdeen on January 18, 1810, he was articled to Decimus Burton in 1826, and in 1830 was admitted a student of the Royal Academy. He was one of the founders of the Architectural Society, to which he was elected Honorary Secretary in 1831. Mr. Mair visited Italy in the year 1832, returning home in the following autumn, when he commenced practice in London as an architect and surveyor. In 1842, when the Architectural Society joined the Royal Institute, Mr. Mair was admitted a Fellow, and served on the Council during the sessions 1842-44, 1848-50, 1853-55, and 1863-64. In 1844 he was elected a member of the Surveyors' Club, which was established in 1792. Mr. Mair was one of the first Life Members of the Architects' Benevolent Society, and served on the first Council from 1850 to 1872,—a period of twenty-three years; and on the death of Sir William Tite in 1873 he was elected Honorary Treasurer, which office he only resigned in 1885, being, however, again elected a Member of Council. Failing health prevented Mr. Mair from attending the meetings as often as he wished, and in 1887 he declined re-election, but was unanimously elected Vice-Treasurer. In 1877 he retired from practice, and resigned his Fellowship of the Royal Institute; but he was elected an Honorary Associate in 1880. The following are a few of the buildings designed and executed by Mr. Mair: — Kneller Hall Training School at Whitton, Middlesex; Northwood House, Cowes; Flass House, Westmoreland; Scarsgill House, Cumberland; Coombe Lodge, Surrey; Longfield Rectory, near Dartford; Penrhas Rectory and school buildings, Monmouthshire; National Schools at Croydon; and various villas, schools, and additions to private residences, banks, &c., in London and the provinces. Kneller Hall, the building of which was begun by Sir Godfrey Kneller in 1709, stands between Hounslow and Twickenham; it was opened in 1850 as a training school for male teachers under the authority of the Committee of Council on Education. Mr. Mair's design, which is an excellent one [see the *Builder*, vol. viii., No. 366, Feb. 9, 1850], was carried out at a cost of about 20,000*l.*, and afforded accommodation for 100 pupils, with apartments for three masters and a separate residence for the principal. The building is now the Royal Military School of Music.—*R.I.B.A. Journal*, Aug. 1.

New Partnership.—Mr. G. A. Pryce Cuxson, quantity surveyor, has taken into partnership Mr. Wm. G. Leigh (who for the last twenty years has been with Messrs. Karslake & Mortimer). The business will be in future carried on under the style or firm of "Pryce Cuxson & Leigh."

Theatre Lighting.—The Wenham Company write to say that they have this year again secured the contracts for lighting Covent Garden Theatre and Her Majesty's Theatre during the run of their Promenade Concert season.

THE LONDON COUNTY COUNCIL.

THE last meeting of the London County Council prior to the adjournment for the recess was held on Friday, the 2nd inst., at Spring-gardens, Lord Rosebery in the chair.

The Theatres Bill.—The Chairman stated that Sir John Lubbock (the Vice-Chairman) had received a letter from the Right Hon. W. H. Smith, with regard to the Theatres Bill, stating that he had conferred with the Home Secretary on the matter, to whose department the matter was more specially subject, and that there was no probability of the Government seeing their way to passing this Bill through the present Session. The right hon. gentleman pointed out that the Bill would need considerable amendment before the Government could pass it, and he would suggest that the Council should take the opportunity of communicating with the Secretary of the Home Department, and also with the proprietors and others interested in theatres, with the view of redrafting the measure.

Tenders.—The Chairman opened several tenders for the erection of lodges and other works in Dulwich Park. These were referred to a Committee, with power to accept and seal the lowest, or such other tender as might, upon inquiry, be deemed satisfactory.

Building Act Business during the Recess.—The first paragraph of the Report of the Standing Committee was as follows:—"The Chairman of the Building Act Committee has called attention to the desirability of arrangements being made by which, during the Council's long vacation of two months, applications made to the Council under the Metropolitan Building and Management Acts, with reference particularly to new streets and buildings, may be considered and dealt with. Applications of this kind are made (though in smaller number) in August and September, as well as in other months of the year, and there is of course inconvenience to applicants if the matters in which they are interested, and upon which they need the decision of the Council, are unduly delayed. To avoid this inconvenience your Committee suggest that there should be one meeting of the Building Act Committee about the middle of the vacation, and that the Committee should, at such meeting, have power to grant or refuse, on behalf of the Council, applications made by builders or others for the Council's approval of plans. The only condition which it seems to your Committee expedient to attach to the delegation of this power to the Building Act Committee is, that any decision upon which the Committee may act should be the unanimous decision of the members present, and that every case so dealt with should be reported to the Council at its first meeting after the vacation. The recommendation which your Committee submit is:—

'That the Council do, under the provisions of the Local Government Act, 1888, sec. 28 (2), delegate to the Building Act Committee power to hold one meeting during the recess, for the purpose of considering applications made by the Council under the Metropolitan Building and Management Acts, and at such meeting to act on behalf of the Council, and to grant or refuse such applications; provided, however, that the Committee shall only act upon such decisions as shall be unanimously arrived at by the members present, and that all such decisions shall be reported to the Council at its first meeting after the recess.'"

This recommendation was agreed to.

Proposed New Council Chamber and Offices.—The Council Chamber and Offices Committee presented the following report:—"Your Committee, on July 9, 1889, reported to the Council that, with regard to the further reference to the Committee as to acquiring a site for a Council Chamber and offices, they had appointed a Sub-Committee to ascertain, if possible, the terms upon which the Corporation would be likely to dispose of a suitable portion of their site on the Embankment for the purposes of the Council. Your Committee have now to report that their Sub-Committee have had a conference with the City Lands Committee on the subject, but they find that until the Council has passed a definite resolution that a site shall be purchased, they are not in a position to enter into practical negociations for that purpose."

Millbank Prison.—The Committee on the Housing of the Working Classes presented the following report:—"Your Committee have to report that they have received from the Home Secretary a letter, intimating that the prison at Millbank would shortly cease to be used as a prison, and that the site upon which it is built would become available for other purposes. The 3rd section of the Act 48 and 49 Vict., cap. 72, gave power to the Secretary of State to sell the site to the Metropolitan Board of Works at a fair market price, but the Board did not think it expedient to avail itself of the offer made to it to that effect in June, 1888. The Secretary of State renewed the offer to the Council on the 24th April last, and your Committee have been in communication on the subject with the Charity Organization Society, the Vestry of St. Margaret and St. John, Westminster, Canon Farrar and Canon Furse, and other persons acquainted with the locality. A Sub-Committee has also made a thorough inspection of the site and

its surroundings, accompanied by a representative of the Home Office, and has obtained a large plan of the ground. The site contains an area of between twenty-two and twenty-three acres. It is low-lying and damp; in fact, when originally purchased by the Government in 1799, it appears to have been a marsh or swamp. Although the existing building is very strongly built, there are signs in every direction of the treacherous nature of the sub-soil, as settlements have evidently taken place below many portions of the boundary wall and also of the prison building. Some idea can be formed of the enormous expenditure which would have to be incurred by building upon this site from the fact that the prison cost 500*l.* per cell, whereas the prisons of modern construction cost about 75*l.* The old foundations, moreover, would be of no avail for new buildings, as the prison seems to have been built upon piles, which by this time would probably be rotting. Before the site could be laid out for building purposes it would have to be raised several feet in order to give a proper fall to the drains, and the very small frontage which the site possesses would interfere to some extent with its development. This frontage would have to be further reduced by the formation of a roadway. Your Committee have reason to believe that the erection of some artizans' dwellings would be of benefit to the neighbourhood, but they feel themselves unable to come to any decision without first ascertaining what the probable cost of the land would be having regard to the very expensive operations that would have to be entered into before the site would be available for building purposes. Your Committee have been in communication with the Home Office, but the Secretary of State has not, up to the present time, sent any answer to their inquiries, beyond the statement that the matter is receiving attentive consideration, and that an answer may be shortly expected. Your Committee are, therefore, of opinion that no conclusion can be come to as regards the purchase of the whole or part of the site for building purposes or for an open space (as has been suggested by the Parks and Open Spaces Committee) until an answer is received from the Government as to the probable price of the land."

The Metropolitan Sewage Outfalls.—Mr. Beal's notice of motion on this subject, to which we made reference last week, was ruled out of order on technical grounds, but Mr. Æneas Smith said that the Council would have to take up the subject in earnest soon, and give days to its consideration.

After clearing the paper of business, the Council adjourned for the recess.

DEPARTING FROM THE ORIGINAL PLAN OF BUILDING.—INJUNCTION.

REINHARDT *v.* MENTASTI BROTHERS was an action by the lessee and occupier of 14, Coventry-street, W., against the owners of the Hôtel Prévitali in Arundel-street, which is immediately adjacent to the back of the plaintiff's house, and only separated from it by a party wall. The defendants recently rebuilt their hotel, and placed a large closed range in one of the kitchens in the basement,—formerly an unused chamber,—and constructed a shaft for carrying off the hot air. The stove did not occupy the site of the fireplace, which must be taken to have existed since the house was first built, and thus far the defendants departed from the original plan of the building. The heat occasioned by the stove passing through the wall injured the plaintiff's cellar on the other side, so that he could no longer store his wine there. Judgment was reserved on the ground that the result of the case would affect many localities and many persons. On the 2nd inst. Mr. Justice Kekewich granted an injunction, stating that he had not been able to find a line of demarcation between those nuisances which may be said to partake of the character of trespass and those of which this cannot be averred, as in the present case, nor a disposition on the part of the Court to grant injunctions more readily against the former than the latter. He approved of the recent ruling of Lord Bramwell, that what makes life less comfortable and causes sensible discomfort and annoyance is a proper subject of injunction. The injunction was not to be enforceable for three months, to enable the defendants to consider and do what is best under the circumstances.

BUILDING ACCORDING TO ARCHITECT'S PLANS.

The Licensing Act, 1874, section 22, provides for a provisional grant of a licence to a public-house about to be erected according to certain plans with which the Justices are satisfied, and when the house has been built an application may be made to them to have it declared "definite," and then it becomes a fully-licensed house; but a refusal to make the provisional licence definite must be on one or two particular grounds,—as for example, that the house is not in fact built in accordance with the plans. In a case before the Queen's Bench Division on Monday, it appeared that some houses having been pulled down in the course of improvements at Hampstead, transfers of licences were made by the magistrates, and there was a plot of land on which it was proposed to build a public-house to be called the "Three Horseshoes," and a provisional licence was granted, and when the house was completed an application was made to have the provisional licence declared definite; but the magistrates, being of opinion that the house was not built according to the plans, refused the application. Subsequently the application to renew the provisional licence was granted by them, although this was opposed by dissentient inhabitants, who desired the plans to be strictly adhered to. The Queen's Bench Division, being moved on the part of the dissentient inhabitants, granted a rule for a *certiorari* to bring up the renewal order to be quashed.

CONCRETE FLOORING.

SIR,—The able and extremely interesting articles on the above subject, by Mr. Frank Caws (published in your issues of July 27 and August 3), have been read by me with very great pleasure.

Owing to ill-health and other causes, I have been able to make but few additional experiments since the publication of my little work ("Iron and Concrete as a Building Material") some dozen years or so ago; the last ones made by me being not later than 1883. From these last experiments I drew the conclusion at the time that, for perfect beam strength, a concrete slab, whatever its size, should be wholly made by the dump of a single mass of the plastic material; for I found, in every instance, that the slabs made by successive layers gave way under bending stress *by horizontal cleavage between the layers*; and this, however small the intervals of time between the on-puts of the added material. I do not, however, regard my conclusions as by any means fixed. More experiments are needed; and I hope that some one younger and better fitted for the work than I am will make them, in the interests of architectural science and the general welfare of mankind.

The work upon which Mr. Caws has entered with so much ability and zeal is more than scientific,—it is humanitarian. I trust his efforts will be met by an equal and corresponding zeal among his brother architects.

THADDEUS HYATT.

THE CHANNEL DRAIN-PIPE.

SIR,—It is very amusing to read Mr. T. L. Watson's special pleading, on page 85, in reply to the strictures on page 41. So also is his assumed ignorance of the existence of practical means for examining the interior of drain-pipes previous to the existence of the channel pipe patented by him in May, 1884. It so happens, however, that in the fourth edition of my book on Plumbing and House Drainage, I show my patent access-pipes, and refer to their use in conjunction with the ordinary or other round pipes for examining the interior of the pipes to see that the joints were all right and no foreign matter left in them. In the said book I also mention that these inspection pipes had been used by various architects, including "Mr. Thomas Watson, architect, Glasgow." Now, supposing Mr. Watson wished to be able to get his hand at the inside of every joint on his drain after it had been laid, he did not require to use an open drain-pipe like a U with a lid along its whole top. He could have used one of my access-pipes *alternately with an ordinary pipe*, and so made a ten times better and stronger job than with his channel-pipe. I do not consider it necessary in practice, however, to have an access opening every 5 ft. or 6 ft. One every 10 ft., 20 ft., or 30 ft. or so is enough, as a lighted candle can be pulled along from opening to opening to see all the interior of the pipe clearly. For Mr. Watson to boast of a U-shaped pipe with a cover all along its top as perfection in drain-laying is the height of absurdity. He has double the amount of jointing than with the ordinary drain-pipe with access-openings at regular or requisite intervals, while, if the long top cover of his pipe were once cemented down (especially if with Portland cement), as he says, then he could not lift a single R4 so easily as he imagines, but would probably break one or more pipes as well as lids!

Another silly plan is to cut away a piece at the faucet and spigot end of each pipe in order to get in to see the inside of the joint. This is as bad as Sir Isaac Newton's large hole in his door for the cat and the small one for the kitten. Neither Mr. Watson nor Mr. Shaw seems to see that the proper place for the hole is in the centre of the pipe, as I had it, and make the hole long enough when one hole does for two or more pipes. Moreover, my lids can be easily lifted off and put on repeatedly, if wished, without damage. "*Ne sutor ultra crepidam*" must have been forgotten by some people in this connection.

W. P. BUCHAN.

Glasgow, 3rd August, 1889.

The Student's Column.

WATER-SUPPLY.—VI.

IGNEOUS AND METAMORPHIC ROCKS.

IN Great Britain Æolian rocks are not very well represented, and although their mode of origin is widely different from the aqueous rocks, their distribution and water-bearing properties are somewhat similar. They occur as drifts and ridges, sometimes having a rough kind of stratification, and are usually arenaceous in character. In Holland and Belgium, the water found in the "sand-dunes" bordering the sea-coast is largely drawn upon by drainage systems. It is even contemplated, amongst other schemes, to supply the City of Ostend from this source.

Igneous rocks, also, do not cover very large areas in England. They are principally found in Cornwall, Devon, Leicestershire, Northumberland, the Lake District, and in many parts of Wales. They occur either as rounded masses a few square miles in extent, or as thin streaks running over the country. Their origin in so far as it governs their mode of occurrence, distribution, and as affecting water-supply may be summarised as follows:—

They have all been in a state of fusion at some time or other, and it depends on the conditions under which they have cooled as to what their structure is. Leaving on one side the questions of mineralogical and chemical composition, which do not concern us at present, we find that the igneous rocks may be divided into two great groups, the *crystalline* and the *amorphous*, and there is every gradation between these two types of structure. The thoroughly crystalline (of which granite is a good type) have cooled at some considerable depth within the earth's crust under the enormous pressure of superincumbent rocks and lateral strains, which latter were gradually removed by the overlying rocks being slowly denuded, before the once deep-seated molten matter was subsequently brought into the light of day. The amorphous igneous rocks, on the contrary, consolidated either at the earth's surface or at a very shallow depth within it. In short, the crystalline rocks may be regarded as the cooled reservoirs of volcanoes, or the former interiors of mountain ranges, whilst the amorphous are merely injections into surrounding rocks from these reservoirs, such as enormous cracks filled with molten matter, which, if it had come to the surface, would be regarded as lava, necks of volcanic vents, &c. At the surface we have lava, ashes, and breccias, which are also classed as igneous. Of course, a great deal more could be said respecting the origin of this class of rocks, and certain qualifications are needed in any attempt to give a brief outline of the subject. What has been said, however, is sufficent for our purpose. It shows the student that igneous rocks are not stratified, and the manner in which water circulates in them, as compared with the aqueous rocks, is so entirely dissimilar as to involve separate consideration.

The crystalline igneous, as we have said, usually occur in large masses; and they penetrate to an unknown depth,—it may be that they compose the whole sub-structure of the earth,—and the rocks surrounding them, whether at the surface or not, are frequently highly indurated, and altered from their original character, by heat. It is well-nigh impossible to state definitely what becomes of rain after soaking into such material, and although shallow wells have been sunk in granites with some success, this is primarily due to the knowledge of the existence of innumerable cracks present in the rock, and to the general water-level of the district. The chief supplies of water from granite are obtained from springs, when the quantity available can usually be approximately ascertained.

The amorphous igneous rocks,—lavas and the like,—although locally important, are not drawn upon very much for water. Perhaps the greatest importance of this class of rock in England and Wales is in its cutting off and modifying the amount available from aqueous rocks. It will be seen that the igneous class burst up through the aqueous, and destroy their continuity. Imagine a considerable stretch of water-bearing aqueous rocks in which a great crack is suddenly formed and filled with lava, running as a more or less vertical sheet in a definite direction for miles through them. The lava sheet (or dyke as it is called) would certainly cut the aquiferous rocks under consideration into two parts, and for all intents and purposes they must hence-

forth be regarded as two separate hydrographical basins. The problem would, decidedly, become more complicated, supposing several sheets were to be injected in various directions. This is precisely the kind of thing that has happened over and over again in the older stratified rocks of this country, and it makes it exceedingly difficult, at times, for us to estimate the amount of water contained in them, and available, in any given area.

Metamorphic rocks include slate, gneiss, schist, quartzite, and, in fact, any rock which has been so considerably altered by heat and pressure as to have substantially changed its original form. They occur either as fringing large igneous masses, or as extending over immense tracts of country. The greater part of North Wales and the Lake District, for example, consist of metamorphic rocks. With them, as with the igneous, it is exceedingly difficult to arrive at an estimate of the water available; they are so hard that it seldom pays to bore into them to any great depth. Locally they give good supplies of water, and being fissured in every direction, and forming, as a rule, elevated land, springs are very numerous and largely taken advantage of.

PERCOLATION.

We have already mentioned that when rain falls to the earth, a portion of it soaks into the ground, and the quantity available in any given stratum is dependent on the amount so absorbed. The absorption may not take place immediately after the rain has fallen. Wherever there are large bodies of water, either as lakes or rivers, the process continually goes on, by leakage. The upper parts of the Thames afford an excellent illustration of this. Gaugings for several miles coming down the stream show a gradual increase in volume, and then, in spite of the fact that tributaries are received, the river not only does not increase, but in occasional dry seasons is materially diminished in volume. This is easily explained on an examination of the ground over which the stream flows. It is found that a portion of its bed is composed of porous absorbent rocks by which the water is abstracted. The absorbed portion goes to swell the general underground supply, and in this way is exceedingly useful; but at the same time it may be pointed out that in such cases it would not be impossible, either by puddling, diverting the stream, or otherwise, to put a stop to this leakage. The question to be resolved would be as to how far the amount so absorbed affected supplies already drawn upon, or which might reasonably be expected shortly to be utilised. If it could be shown that the absorbed portion simply ran to waste by soaking too deeply into the earth, or was superfluous, there would be no reason why the volume of any such river should not be artificially augmented. On the other hand, if this waste could not be proved, we should not be justified in increasing the volume of the river at the expense of any underground drainage area deriving its water from this source.

STAINED GLASS.

London.—The large west window in Holy Trinity Church, Shoreditch, has just been filled with stained glass, from the studios of Messrs. Mayer & Co., of Munich and London. The window consists of four lights, with a trefoil above, and represents the twelve Apostles. The same firm has also executed the east window in this church, the subject of which is the Crucifixion.

Middlesbrough. — A stained-glass window has just been placed in the east end of St. Peter's Church as a memorial to the late Vicar. The subjects represented are Our Lord at the Pool of Bethesda and two of the Acts of Mercy, Feeding the Hungry and Clothing the Naked. The window was designed and executed by Messrs. Warrington & Co., of Fitzroy-square, London.

St. Leonard's-on-Sea.—The large east window of St. John's Church, Hollington, has been filled with stained glass, executed by Messrs. Charles Evans & Co., London, from the designs of Mr. Charles R. J. Evans. The subject represented is the "Transfiguration," with the angels and various symbolical emblems introduced in the ornamental canopies and bases, the whole being treated in quiet though rich colouring. The window is the gift of Mrs. Nutter, of Brookwood, in memory of her husband, two richly-engraved brasses, designed and executed by the artist, recording the fact.

RECENT PATENTS.

ABSTRACTS OF SPECIFICATIONS.

9,648, Traps and Gullies. J. Phillips.

In order to remove as far as possible the defects of the insanitary street gully, what is claimed to be an improved gully of special shape and size is used. The chamber or gully itself is made of iron, stoneware, or other material. A syphon trap provided with a cover is used in connection with this invention. The flat cover may be lifted to open the trap in order to remove impediments for repairs, or to charge the sewer with disinfecting fluids, &c.

9,761, Plastic Wall Decoration. J. S. Palmer.

This invention relates to a special plaster composition for wall and ceiling decorations. The composition, when in a moist or plastic state, is spread upon a backing of paper, canvas, or such-like substance, either in sheets or in lengths as may be found convenient. The layer is made thick or thin at will, and relief or intaglio patterns are impressed upon the substances by engraved or embossed cylinders or plates.

1,278, Metal Laths for Building. E. Nunan.

According to this invention, the lathing or laths is made in strips of metal. A hold or key is afforded to the plaster or cement by reason of the special form or shape of the laths, and when the plaster is applied, the roof, ceiling, or partition, is made fireproof. The laths are bent to form angles or curves, which will serve to retain or act as a key for the mortar or plaster.

6,822, Metallic Roofing. S. C. Frederick.

The object of this invention is to produce cheap metallic roofing which, at the same time, shall be strong, durable, and not liable to get out of repair. The framing of the roof, or roof truss, is principally composed of flanged supports upon which the metallic plates rest, packing being placed between the joints of the metal-plates so as to insure a perfect joint. The roofing is claimed to be both fireproof and weather tight.

8,435, Fastenings for Doors and Windows. M. Goldmann.

This invention is applicable to chiefly fastening sashes, windows, or folding-doors. The fastening is effected by two vertical rods being raised or lowered by the action of a knob, which is pushed, when it is desired, to actuate the bolts.

NEW APPLICATIONS FOR PATENTS.

July 22.—11,630, J. Ash, Latches and Locks.—11,645, R. Scott, Cisterns for Flushing Water-closets.—11,658, G. Bastucchi, Plastering Walls and Ceilings.—11,668, W. Doehring, Fire and Sound-proof Plastering.

July 23.—11,715, V. Broughton, Combination Square Mitre and Level.

July 24.—11,771, S. Banner, Paints or Enamels.—11,792, A. Bates, Traps or Gullies.

July 25.—11,843, W. Wise, Extension Ladders.

July 26.—11,901, E. Truman, Sanitary arrangements of Buildings.—11,904, E. Cubbon, Water-closets, &c.—11,922, G. Redfern, Composition for Covering Walls, &c.

July 27.—11,948, J. Lovell, Hanging Window Sashes.—11,959, J. Stenner and others, Chimney Cowl and Ventilator. — 11,964, R. Thompson, Flushing Cisterns for Water-closets, &c.—11,970, A. Martin, Machines for Wood and Sheet Metal Mouldings, &c.

PROVISIONAL SPECIFICATIONS ACCEPTED.

7,020, H. Kimpton, Tip-over Flushing Tank.—9,305, E. Johns, Water-closet Basins and Traps.—9,616, C. Henderson, Stoves for Heating and Ventilating Buildings.—9,726, F. Bolus, Discharge-pipe for Water-closets.—10,297, D. Knowles, Sash-lifts.—10,339, O. Imray, Lock and Latch for Doors.—10,463, W. Douslin, Cupboard-turn or Door-fastener.—10,530, T. Widdowson, Door-springs.—10,610, C. Showell, Sash, Door, and other Handles.—10,618, H. Atkin, Fire-resisting Flooring, &c.—10,759, E. Massey, Fireplaces, Mantelpieces, &c.—10,903, W. Morrison, Ventilation of Halls, &c.—10,977, F. MacGauran, Gate-fittings.—11,036, H. Tucker, Window-fastener.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to Opposition for Two Months.

10,569, H. Stevens and W. Ames, Machines for Making Hinges.—11,429, J. Parkinson and others, Rules, T-squares, Levels, &c.—11,519, J. Taylor, Stench-trap for Sewers.—13,694, J. Broadey, Water Waste-preventing Syphon Cisterns. — 13,720, S. Varley and G. Driver, Lightning Conductors for Buildings.—13,952, H. Steven, Fittings for Baths, Lavatories, &c.—13,955, J. Rushton and T. Atkinson, Fastenings for Sash-windows, &c.—14,733, A. Robb, Stonemason's Points, Chisels, &c.—15,016, W. Scott-Moncrieff, Connections for Water-supply to Closets.—16,019, H. Owens, Operating Fan-lights, Skylights, &c.—17,746, W. Sturge, Ceiling Roses and other Electrical Fittings.—6,860, J. Tall, Hinges with Stays or Plates for Ledge-doors.—7,652, C. Butcher, Kitchen Ranges. — 8,801, N. Sorensen, Door-locks, &c.—9,973, J. Wilson, Rolling Partitions, &c.

RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

JULY 23.—By DRIVER & Co. (at Somerton).

Somerton—Numerous cottages, houses with shops, farm-houses, with enclosures of land £5,300

JULY 25.—By WYATT & SON (at Chichester).

Chichester, East Walls-rd.—F. store and cottage... 350
East Walls-rd.—"The Malthouse," long leasehold 300
F. residence, with yard and stabling 300
F. residence in East-st., r. £45 p.a. 650
East-gate-sq.—F. house and premises, r. £37 p.a. 460
Market-rd.—F. and l. house, r. £12 p.a. 190
St. Pancras—F. house, r. £12 p.a. 185
Nytimber—F. house and shop, r. £13 p.a. 200

By DRIVER & Co. (at Birmingham).

Coventry, near—Enclosures of f. land, 2a. 3r. 30p. 190
Berkswell Hall Estate—"Berkswell Farm," 131a. 0r. 3p., f., r. £267 p. a. 6,800
"Yew Tree Farm" and 34a. 1r. 28p., f., r. £71 p. a. 2,350
Enclosures of f. land, 19a. 3r. 27p. 1,550
The f. residence "Mount Pleasant," and 13.1r.13p. 1,700
Five f. cottages and 3a. 0r. 26p. 400
"Hill Farm" and 14a. 1r. 17p., f., r. £31. 10s. p.a. 700

JULY 26.—By T. TURNER.

Willesden—26, Belton-rd., u. t. 90 yrs. g. r. £6, r. £28. 12s. 150
Notting-hill—70, Portland-rd., u. t. 60 yrs., g. r. £6, r. £74 p. a. 280

JULY 29.—By DRIVER, TEWSON, & Co.

Whitechapel—35, Commercial-st., f., r. £230 p.a.... 3,500

By WRATHERALL & GREEN.

Hoxton—3, Cropley-st., u.t. 53 yrs., g.r. £10, with possession 275

By J. T. BEDFORD & Co.

Lee—3, Southbrook-rd., u.t. 74 yrs., g.r. £6. 5s., r. £35 p.a. 280

By WALKER & RUNEE.

Forest Hill, Stanstead-rd.—Two villas, e.r. £76 p.a. 620

By W. A. BLACKMORE.

Hampstead-rd.—52 and 54, Little George-st., and 1, Little Exmouth-st., u.t. 21 yrs., g.r. £14, r. £95 p.a. 400

By GRAVES & SON.

Bayswater—23, Blomfield-st., u.t. 53 yrs., g.r. £5, e.r. £60 360

By H. HOOPER.

Dulwich—69, Melbourne-grove, u.t. 81 yrs., g.r. £7, r. £36 p.a. 395
4, Derwent-grove, u.t. 83 yrs., g.r. £4, r. £26 p.a. 325

By J. HIBBARD.

Walworth—29, Cook's-rd., u.t. 36 yrs., g.r. £5, r. £28 220

JULY 30.—By DRIVER, TEWSON, & Co.

Barnes—L.g.r. of £1, term 35 yrs. with reversion for 15 yrs. to e.r. of £240 p.a. 900
L.g.r. of £120. 5s., u.t. 30 yrs. and reversion to r. for 20½ yrs. 3,000
L.g.r. of £168. 14s., u.t. 50 yrs. with reversion to r. for ½ year 3,020
L.g.r. of £10. 5s., u.t 50 yrs., with reversion to r. for 15 yrs. 250
L.g.r. of £17. 15s., u.t. 38 yrs., with reversion to r. for 12 yrs. 405
L.g.r. of £15. 15s., u.t. 40 yrs., with reversion to r. for 10 yrs. 360
The residence "Castelnau House," u.t. 50 yrs., no g.r., with possession 1,700
L.g.r. of £14. 11s., u.t. 55 yrs., with reversion to r. for ½ year 280
L.g.r. of £11. 10s., u.t. 35 yrs., with reversion to r. for 15 yrs. 395
L.g.r. of £27. 15s., u.t. 35 yrs., with reversion to r. for 15 yrs 615
L.g.r. of £9. 3s., u.t. 35 yrs., with reversion to r. for 15 yrs. 285
1 to 8, Castelnau-ter., u.t. 60 yrs., no g.r., r. £248 p.a. 2,900
L.g.r. of £5, u.t. 35 yrs., with reversion to r. for 15 yrs. 155

By Messrs. SPELMAN.

Great Yarmouth—The Theatre Royal, f. 1,200

By A. H. TURNER & Co.

Kentish Town—67, Malden-rd., u.t. 60 yrs., g.r. £10, r. £55 p.a. 610
Balham—F. g.r. of £12. 10s. with reversion in 90 yrs. 320

By Messrs. WILMOTT.

Ealing—21, Argyle-rd., u.t. 80 yrs., g.r. £8. 10s., r. £45 p.a. 350
Acton—22 and 24, Shaftesbury-rd., u.t. 87 yrs., g.r. £10 100

By GIDDY & GIDDY.

Westminster—5, Lambeth Palace-rd., u.t. 35 yrs., g.r. £75 1,400

By JONES, LANG, & Co.

Notting-hill—192 and 194, Kensington Park-rd., u.t. 71 yrs., g.r. £16, r. £75 p.a. 400

By WALLIS, RIDDETT, & DOWN.

Chiswick—Heathfield and Burlington Cottages, f. r. £180, p.a. 3,350

By WALTON & LEE.

Lyndhurst, near—"The Vicarage" and grounds, f. 1,950

JULY 31.—By R. TIDEY & SON.

Islington—25, Prebend-st., u.t. 37 yrs., g.r. £4. 4s., r. £30 205

By ARBER, RUTTER, & WAGHORN.

Haverstock Hill—"The Lawn," u.t. 34 yrs., g.r. £16. 8s., r. £80 700

By NORTON, TRIPP, & GILBERT.

Sydenham—52, West Hill, u.t. 62 yrs., g.r. £15 p.a. 500

By F. JOLLY & Co.

Leytonstone—2, Ashbridge Villas, f., e.r. £30 370

By G. B. HILLIARD & SON.

Braintree, near—"Great Grandcourts Farm," 359a. 2r. 25p., f. 3,600
A plot of land, 1a. 2r. 35p., f. 38
"Drapers's Farm," containing 312a. 3r. 12p. f.... 2,120

By R. G. WOODS.

Lower Norwood—15 to 25 (odd), Birchanger-rd., f., r. £165 p.a. 1,480

By Rutley, Son, & Vine.

Gray's Inn-rd.—53, Gough-st., u.t. 30 yrs., no g.r., also a l.g.r. of £10 p.a., u.t. 30 yrs. £450
Bloomsbury—12, Silver-st., u.t. 40 yrs., g.r. £8, r. £80 p.a. 600
Leytonstone—L.g.r. of £226, u.t. 57 yrs., at a g.r. of £70, p.a. 2,640
Maida Vale—35, Lanark Villas, u.t. 60 yrs., g.r. £10 r. £46 p.a. 480
Hampstead—64, Fleet-rd., u.t. 61 yrs., g.r. £7, e.r. £38 p.a. 280

By Hampton & Sons.

Ightham, Kent—"The Mote," and 305a. 1r. 36p., f. 35,000

By A. Chancellor.

Camden Town—120 and 122, Camden-rd., u.t. 36 yrs., g.r. £4, r. £120 p.a. 1,120
124 and 126, Camden-rd., u.t. 35 yrs., g.r. £4, r. £120 p.a. 1,100
167, King's-rd., u.t. 35 yrs., g.r. £2, r. £44 p.a. 400
L.g.r. of £8. 10s. p.a., u.t. 35 yrs. 125
L.g.r. of £30 p.a., u.t. 35 yrs. 400

By Chinnock & Co.

The Cardigan estates offered at Leeds on July 23, 24, 25, and 26:—
Wakefield Division—A chief rent of £50, secured by a r. of £750 p.a. 1,650
F. farm, 40a. 3r. 7p., r. £57 p.a. 1,500
Church Farm, containing 43a. 2r. 35p., f., r. £46. 15s. p. a. 1,460
Topcliff Grange Farm, 62a. 3r. 39p., f., r. £80 p. a. 2,800
"The Cardigan Arms Inn" and 133a. 2r. 4p., f., r. £199. 10s. p. a. 5,500
F. house and 14a. 0r. 1p., in West Ardsley, r. £30. 18s. 9d. p. a. 1,150
F. farm, containing 20a. 0r. 15p., r. £40 p. a. 1,360
Upper Green Farm, 12a. 3r. 32p., f., r. £27. 16s. 9d. 750
Top Fold Farm, 21a. 1r. 23p., f., r. £35 p. a. 1,000
The Howley Park Dye Works, and 2a. 0r. 33p., f., r. £50 p. a. 1,300
"The Cardigan Arms Inn," at Morley, f., r. £12 p. a. 450
Numerous enclosures of arable, pasture, building, and woodland, containing 277a. 0r. 7 p. 13,987
Rent charges of £18. 16s. 1d. p.a. 424
Five plots of land, f. 1,940
Two f. plots of garden land 220
F.g.r. of £2 p.a., amply secured 75
Eight f. cottages, r. £53. 8s. 8d. p.a. 1,755
Leeds Division—The Burley Steam Laundry in Cardigan-lane, f., r. £23 p.a. 540
F. land, "The Cricket Fields," 17a. 3r. 6p. 7,500
Moor Grange Farm, 75a. 2r. 19p., f., r. £135 p.a. 6,000
The f. residence, "Abbey View," and 44a. 3r. 30p., e.r. £50 p.a. 3,150
The Woodside Paper Mills, and 4a. 3r. 34p., f., r. 58 p.a. 900
A f. farm of 10a. 2r. 7p., at Farnley Moor Top, f., r. £27 p.a. 500
A f. farm of 10a. 3r. 18p., at Farnley Moor Top, f., r. £30. 7s. 6d. p.a. 700
Church Farm, 28a. 3r. 8p., f., r. £44 p.a. 1,100
Towlers Farm, 12a. 3r. 10p., f., r. £20 p.a. 510
Park Spring Wood, 45a. 3r. 8p., f. 800
Park Spring Quarry, 22a. 1r. 10p., f. 730
Fleethough Farm, 63a. 1r. 38p., f., r. £112 p.a. 3,600
Newlay Gardens, 3a. 3r. 3p., f., r. £11 p.a. 690
Five plots of f. building land 3,360
Enclosures of f. building land, 28a. 0r. 12p. 2,670
Enclosures of f. accommodation land, 23a. 1r. 28p. 1,245

Aug. 1.—By Beadel & Co.

Lymington, Hants—"Walhampton Cottage," and 4a. 2r. 5p., f. 1,800
Two cottages and 1a. 3r. 32p., f. 350
Two f. enclosures of land, 1a. 1r. 13p. 200
Five cottages and 6a. 2r. 10p. 600
Malden, near—Four f. cottages, r. £31. 4s. p.a. 430

By G. F. Francis.

Pimlico—9, Churton-pl., u.t. 40 yrs., g.r. £60, e.r. £60 p.a. 410

By Harland & Son.

Horton-sq.—No. 48 and stabling, &c., f., r. £158 p.a. 1,980
No. 50, Hoxton-sq., f., r. £60 p.a. 820
4 and 6, Rufus-st., f., r. £39 p.a. 510
Shoreditch—120 and 122, Laburnham-st., f., r. £54 p.a. 610
Kennington—16 to 22 (even), Smith-st., f., r. £83. 4s. p.a. 905

By C. D. Field & Sons.

Harrow—3 to 3, Wealdstone-villas, u.t. 92 yrs., g.r. £33 1,075
New Southgate—2, 4, and 6, Connaught-ter., u.t. 80 yrs, g.r. £13. 10s., r. £46. 16s. 125
Peckham—2, Marmont-st., u.t. 67 yrs., g.r. £10., r. £35 p.a. 215

By G. Brinsley.

Walworth—144, Boyson-rd., u.t. 63 yrs., g.r. £6. 10s., r. £34 390

By Staff & Curtis.

Gunnersbury—5, Gordon-villas, u.t. 90 yrs., g.r. £3. 10s., r. £32 275
Wandsworth—9, Colerick-villas, u.t. 98 yrs., g.r. £7, r. 36 p.a. 335

By Newbon & Harding.

Islington—49, Packington-st., u.t. 47 yrs., g.r. £6. 6s., r. £50 400
6, Church-st., f., e.r. £40 430
Pickering-st.—A plot of f. land 95
Holloway—30, Durham-rd., u.t. 68 yrs., g.r. nil, r. £70 p.a. 625
147, Seven Sisters'-rd., u.t. 61 yrs., g.r. £6, r. £65 p.a. 420
Clerkenwell Close—Nos. 48 and 49, f., r. £56 p.a. 600
13 and 14, St. James's-st., f., r. £96 p.a. 1,400
Wandsworth—F.g.r. of £38, with reversion in 67 yrs. to e.r. of £230 p.a. 855
F.g.r. of £18, with reversion in 58 yrs. to e.r. of £140 p.a. 405
Clapham—53 to 59 (odd), Solon New-rd., u.t. 90 yrs., g.r. £20 945
Chalk Farm—46, Belmont-st., u.t. 74 yrs., g.r. £6. 10s., r. £48 p.a. 300
93, Belmont-st., u.t. 74 yrs., g.r. £6. 6s., r. £46 p.a. 405
Homerton—90, 92, and 94, Hassett-rd., u.t. 70 yrs., g.r. £12. 12s. 625
Hornsey-rd.—21, 23, and 58, Marcellus-rd., u.t. 91 yrs., g.r. £15 430

Aug. 2.—By W. W. Jenkinson.

Croydon—6, Amberley-gr., f. £240

[*Contractions used in this list.*—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; yd. for yard, &c.]

MEETINGS.

Saturday, August 10.

Royal Archæological Institute of Great Britain and Ireland. — Norwich Congress, continued. (For programme, see *Builder* for July 20, p. 46).

Crystal Palace School of Engineering.—Award of Certificates (Sir Douglas Galton, F.R.S., in the chair). 1 p.m.

Monday, August 12.

Architectural Association.—Annual Excursion: King's Lynn.

Clerks of Works' Association (*Carpenters' Hall*).—Mr. W. Horn on "Turkish Baths." 8 p.m.

Royal Archæological Institute of Great Britain and Ireland.—Norwich Congress (continued).

Tuesday, August 13.

Architectural Association.—Excursion (continued).

Royal Archæological Institute of Great Britain and Ireland.—Norwich Congress (continued).

Wednesday, August 14.

Architectural Association.—Excursion (continued).

Royal Archæological Institute of Great Britain and Ireland.—Norwich Congress (continued).

Thursday, August 15.

Architectural Association.—Excursion (continued).

Friday, August 16.

Architectural Association.—Excursion (continued).

Saturday, August 17.

Architectural Association.—Excursion (continued).

Glasgow Architectural Association.—Visit to Rowallan House, near Kilmarnock.

Miscellanea.

The State of Strasburg Cathedral.—Last year the municipality of Strasburg, in order to have an authoritative opinion on the condition of the Cathedral, requested M. Boeswillwald, the French inspector-general of historical monuments, and Herr von Schmidt, the architect of St. Stephen, Vienna, to make an exhaustive examination of the whole structure. The two architects have agreed upon a report, which has now been printed and circulated. According to this report, the structural solidity of the principal portions of the edifice is unimpaired, notwithstanding rather considerable cracks, especially in several buttresses and walls of the towers and the principal front. The interior of the cathedral, after the repairs made since 1870, shows no serious defects. It is different, however, with its exterior, which is reported to be in a serious state of decay in many places. Some parts of it are so much damaged that the work of strengthening and restoration should not be delayed, while the repairs of other portions may be undertaken within the next twenty years. No estimate is given as to the cost of the repairs recommended.

The Scott Monument, Edinburgh.—"Civis" writes as follows to the *Scotsman*:—"A principal eyesore in Edinburgh is the unfinished monument to our most distinguished citizen, Sir Walter Scott, in its most prominent position in Princes-street. A copy of the structure as intended to be finished was furnished to each of the subscribers in aid of the fund for erecting the monument. It shows the ornamental stone screen around the base, and to any person of proper taste such an addition is necessary to give effect to the general appearance of the monument. There are several hundred pounds in the hands of the Town Council derived from the visitors' fees. More would be obtained if asked for to almost any amount by the numerous admirers of Sir Walter Scott in Edinburgh. Some one should take the matter in hand."

London and County Banking Company (Limited).—The report of the directors of this company, presented to the shareholders at the half-yearly meeting held on the 1st inst., states that, after paying interest to customers and all charges, making provision for bad and doubtful debts, allowing for rebate on bills not due, and transferring 15,000*l.* in reduction of Premises Account, the net profits for the half-year ending June 30 amount to 225,237*l.* 15s. 7d. This sum, added to 29,404*l.* 2s. 4d., the balance brought forward from last account, produces a total of 254,641*l.* 17s. 11d. An interim dividend for the half-year of 10 per cent., which will absorb 200,000*l.*, has been declared, leaving the sum of 54,641*l.* 17s. 11d. to be carried to the Profit and Loss New Account. The balance-sheet will be found printed in our advertisement columns.

Openings for the Building Trade.—From some recent reports of British Consuls on the condition and trade of their various districts, we give the following particulars:—*Bordeaux.*—"A large hotel, containing all modern conveniences, is greatly needed here. If a suitable site be selected, capital would be well employed in such an undertaking. The population of Bordeaux is about 250,000, nearly 1,000 of whom are British." *Nice.*—"There is an opening at Cimiès for the erection of one or more high-class hotels, that hill, as well as the Montbarron, presenting unrivalled sites as yet wholly unoccupied, while the one hotel and the *pension* at present existing there are over-crowded, although they are too far from the town of Nice to profit by all the advantages of their proximity." *Finland.*—"There is scope for more enterprise in British trade with Finland. Much more might be done in exporting building-materials, &c. The population of Helsingfors, for example, increases very rapidly, necessitating the construction of many new public and private buildings, some being of great size, five and six stories high. In these new edifices, at which work is often carried on night and day by the aid of the electric light, the most improved machinery, iron beams, girders, &c., are extensively used. German houses get most of the orders for these materials, which could be provided at least as cheap and as well by our own manufacturers."

Kirkstall Abbey.—At a meeting of the Council of the Thoresby Society, held in the Red Hall on Thursday last, attention was drawn to the necessity for taking immediate steps for the preservation of Kirkstall Abbey, and it was resolved that "this Council desires to respectfully draw the attention of the Corporate Property Committee of the Town Council to the necessity of taking immediate steps for the preservation of Kirkstall Abbey, and that as many members of the Council as possible wait upon Sir Edwin Gaunt for this purpose." In pursuance of this resolution, a deputation, headed by Mr. J. R. Ford, one of the Vice-Presidents of the Society, was yesterday received by Sir Edwin Gaunt, Chairman of the Corporate Property Committee. In handing to him a copy of the resolution, Mr. Ford said that the deputation was most desirous to strengthen the hands of the Corporation in this matter, and especially desired to direct their attention to two points, the prevention of injury to the Abbey by visitors, and the permanent preservation of such parts as were falling into decay. In reply, Sir Edwin expressed his concurrence with the wishes of the Society for the effective preservation of the Abbey, a matter which was receiving the serious attention of the Corporate Property Committee, and promised to bring the matter before the members. After thanking Sir Edwin for his courtesy the deputation then withdrew.—*Leeds Mercury*, Aug. 3.

A System of Self-adjusting Louvres.—Major Bale's self-adjusting louvre, for ventilating and lighting buildings and other spaces, has been patented by Mr. Powis Bale. The louvres are made with adjusting rods, pivoted to levers on the back of the louvres at each end, the louvres are hung on centres by pivot screws through levers, near to the louvre, and working in the jambs of louvre-frame, in window, or other openings. The louvres balance open at the required angle, and are automatically controlled by having counterbalance weights, which may rest on the window-sill, or be put out of sight, at any distance, and connected by a wire or chain to the adjusting rods, each weight being made in three graduated sections, which are raised in succession by the adjusting rods as the louvres close in proportion to the pressure of atmosphere or wind upon them, thus equalising the admission of air. The weights are cut, each, in three horizontal sections (increasing in arithmetical progression), the upper section provided with hanging ring, or loop, on the top, and a piston-rod screwed in under, which passes vertically through the middle and lower sections bored to receive it. The piston is provided with a fixed washer, or nut, on its length, to lift the middle section of the weight, and a moveable nut screwed on the end of the piston, to bring the lower section into action.

Premises near Westminster Bridge.—Mr. George Jennings, of Stangate, writes to say that the lease of the extensive premises situated near Westminster Bridge, lately occupied by the well-known firm of boat-builders, Messrs. Searle & Son (who have removed to Henley-on-Thames), has been acquired by him for an extension of his business.

Composition of Old Mortar.—In March of this year, remains of a foundation were laid bare near Oberflorstadt, Hessen, which were pronounced to be of great antiquity. Subsequent examinations made by Professor Adamy led him to the conclusion that the remains were those of a sanctuary erected in honour of the Persian god of light, Mithra, about the middle of the third century. Four samples of the mortar used in the construction were chemically analysed, with the following results:—

	I. Per cent.	II. Per cent.	III. Per cent.	IV. Per cent.
Moisture	0·97	1·32	2·41	1·55
Chemically combined water	3·05	2·76	2·91	3·39
Sand	78·02	77·02	64·17	76·71
Carbonate of lime	13·16	8·41	15·08	5·78
Carbonate of magnesia	0·38	0·42	1·24	1·14
Sulphate of lime	0·07	0·33	0·37	0·37
Lime otherwise combined	1·21	0·97	2·27	1·39
Soluble silicic acid	1·11	1·37	2·46	1·08
Alumina and peroxide of iron	7·44	7·35	8·33	8·17
Chlorides and alkalis	Trace	Trace	Trace	Trace
	100·03	99·94	99·83	99·53

One feature worth noting is the percentage of lime to the sand used, the proportion being in the four samples 8·86, 12·65, 5·33, and 13·87 per cent. of sand respectively to one part of lime; the sand used for these mortars being very coarse-grained.

The Registration of Plumbers.—Provident thrift amongst workmen is one of the most commendable and praiseworthy features of trades union organisations. An admirable and, indeed almost unique, example of the rewards accorded to wise forethought of this description was furnished on Friday evening in last week, when the United Operative Plumbers' Association, at a meeting in the Guildhall, Derby, presented one of their members, Mr. W. Savage (who has been incapacitated from work, owing to lead poisoning) with 100*l.* from the incapacitated fund. Mr. Alderman Bemrose, J.P.,—well known for his interest in sanitary matters in Derby,—presided, and the Borough Surveyor, the Medical Officer of Health, and the Chief Sanitary Inspector (himself a practical expert in plumbing) evidenced their interest in the undertaking, not only by being present, but by speeches appropriate to the occasion. Allusion was incidentally, and we think very properly made to the importance of registration, and it is gratifying to learn that since the commencement of the Society in 1886, upwards of 4,000 members have passed the test, *i.e.*, the examination in the theory and practice of plumbing, requisite for this registration. A centre of instruction, with technical classes, has recently been established in Nottingham, and we hope that, ere long, similar advantages may be extended to the plumbers of Derby and the neighbourhood.—*Derby Advertiser.*

The English Iron Trade.—The actual business done in the English iron market during the past week has been comparatively limited, on account of the intervening holidays; but, speaking generally, trade is brisk, and an upward tendency still prevails. Sales of pig-iron have not been large, but the market is steady, and prices are buoyant. Scotch warrants have been going up all the week, and the improved feeling continues. Scotch makers, who are doing well, are again asking higher prices. The rise in Cleveland iron during the week cannot be placed at less than from 6d. to 9d. a ton, while hematites have advanced 1s. Lancashire makers have also raised their prices 1s., while in Worcestershire and Staffordshire values are strong. Considering the limited trade done during the past week, the fresh advances made in finished iron, ranging from 5s. to 10s. a ton, is all the more significant. Tin plates seem to be making a move at last, an advance of 6d. a box being announced from South Wales. Steel keeps in very large demand, notably for shipbuilding purposes; but in other departments the inquiry is almost equally well maintained. Shipbuilding continues brisk, and activity rules in the engineering trades.—*Iron.*

The North Sea-Baltic Canal.—The work upon the North Sea-Baltic Canal is rapidly progressing, a large number of men being now employed upon this great undertaking. At Grünthal, the highest point on the canal, a great road and railway bridge combined will cross it, under which the largest ships will be able to pass. There are at present five steam excavators at work upon the canal, and shortly dredgers will be substituted. A large number of Austrian and Italian labourers are employed, wages varying from 2s. 9d. to 3s. 9d. a day

PRICES CURRENT OF MATERIALS.

TIMBER.	£.	s.	d.	£.	s.	d.
Greenheart, B.G. ....ton	7	0	0	7	15	0
Teak, E.I. ....load	12	0	0	14	0	0
Sequoia, U.S. ....foot cube	0	2	3	0	3	0
Ash, Canada ....load	3	10	0	5	0	0
Birch ,, ...	3	10	0	6	0	0
Elm ,, ...	4	0	0	5	0	0
Fir, Dantzic, &c.	2	0	0	3	10	0
Oak ,, ...	3	10	0	4	10	0
Canada	5	10	0	7	10	0
Pine, Canada red	3	0	0	4	0	0
,, yellow	3	10	0	5	5	0
Lath, Dantzic ....fathom	4	10	0	5	10	0
St. Petersburg	5	0	0	6	10	0
Wainscot, Riga, &c. ....log	2	15	0	4	5	0
Deals, Finland, 2nd and 1st...std.100	9	0	0	11	0	0
,, ,, 4th and 3rd....	7	10	0	8	15	0
Riga ,, ...	7	0	0	9	0	0
St. Petersburg, 1st yellow	11	0	0	15	0	0
,, 2nd ,, ...	10	0	0	11	0	0
,, white	7	0	0	10	10	0
Swedish	8	0	0	10	0	0
White Sea	9	10	0	12	0	0
Canada, Pine, 1st	16	0	0	22	0	0
,, ,, 2nd	11	0	0	17	10	0
,, ,, 3rd, &c.	8	0	0	10	10	0
,, Spruce, 1st	9	10	0	11	0	0
,, ,, 2nd and 2nd	7	0	0	9	0	0
New Brunswick, &c.	8	10	0	9	10	0
Battens, all kinds	6	10	0	19	0	0
Flooring Boards, sq., 1 in., prepared, First	0	11	0	0	14	6
Second	0	8	0	0	10	9
Other qualities	0	5	6	0	7	9
Cedar, Cuba ....foot	0	0	4½	0	0	4½
Honduras, &c.	0	0	4½	0	0	4½
Mahogany, Cuba	0	0	4½	0	0	6½
St. Domingo, cargo average	0	0	4½	0	0	6½

TIMBER (*continued*).	£.	s.	d.	£.	s.	d.
Mahogany—Mexican, cargo avg....	0	0	4½	0	0	5½
Tobasco ,, ...	0	0	5½	0	0	6½
Honduras ,, ...	0	0	5½	0	0	6½
Box, Turkey ....ton	6	0	0	15	0	0
Rose, Rio	15	0	0	20	0	0
Bahia	14	0	0	18	0	0
Satin, St. Domingo ....foot	0	0	6	0	1	0
Porto Rico	0	0	2	0	0	3
Walnut, Italian	0	0	4½	0	0	6½
METALS.						
Iron—Bar, Welsh, in London...ton	5	5	0	5	10	0
,, ,, at works in Wales ...	4	15	0	5	0	0
,, Staffordshire, in London ...	5	10	0	6	10	0
Copper—						
British, cake and ingot.... ton	46	0	0	46	10	0
Best selected	47	0	0	47	10	0
Sheets, strong	53	10	0	0	0	0
Chili, bars	43	0	0	43	10	0
Yellow Metal....lb.	0	0	5	0	0	5½
Tin—						
Straits ....ton	89	10	0	0	0	0
Australian	89	15	0	0	0	0
English Ingots	93	10	0	0	0	0
Zinc—English sheet ....ton	21	0	0	23	0	0
OILS.						
Linseed ....ton	20	15	0	21	0	0
Cocoanut, Cochin	26	10	0	27	10	0
Ceylon	23	10	0	0	0	0
Palm, Lagos	25	0	0	0	0	0
Rapeseed, English pale	31	10	0	0	0	0
,, brown	30	0	0	0	0	0
Cottonseed, refined	26	15	0	28	0	0
Tallow and Oleine	21	0	0	40	0	0
Lubricating, U.S.	5	0	0	6	0	0
,, refined	7	0	0	13	0	0
Tar—Stockholm ....barrel	1	4	6	0	0	0
Archangel	0	15	9	0	16	0

COMPETITION, CONTRACTS, & PUBLIC APPOINTMENTS.

Epitome of Advertisements in this Number.

COMPETITION.

Nature of Work.	By whom Required.	Premium.	Designs to be delivered.	Page.
Elevation of Front of New Post-Office	Hertford Poor's Est. Trus	£25 and £5	Sept. 9th	ii.

CONTRACTS.

Nature of Work, or Materials.	By whom Required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.	Page.
Engine Shed, Battersea	L. B. & S. C. Railway...	C. H. Gough	Aug. 12th	xii.
Tar Paving	Croydon Corporation ...	W. Powell	Aug. 13th	xii.
Re-construction of Viaduct, near Stroud	G. W. R. Co.	*Official*	Aug. 14th	ii.
Construction of Bridge, near Bristol	do.	do.	do.	ii.
Construction of Two Subways, Briton Ferry	do.	do.	do.	ii.
Construction of Loop Line, Plymouth	do.	do.	do.	ii.
House-Drainage, &c.	Royal Boro. of Sutton Coldfield	C. F. Marston	do.	xii.
Kerbing, Channelling, and Paving Footpaths	do.	do.	do.	xii.
Blue Guernsey Granite Spalls	West Ham Union	*Official*	do.	xii.
Repair of Wards, &c., N. W. Hospital	Met. Asylums Board ...	Pennington & Bridgen...	Aug. 19th	xii.
Reproducing Groups of Figures	Vestry of St. Pancras...	W. Booth Scott	do.	xii.
Additions, Worship-street Police Court....	Com. of H.M. Works...	*Official*	Aug. 20th	xii.
Railway Footbridges....	Dover Town Council....	do.	do.	xii.
Pier and Promenade....	Dover Promenade Pier Co., Limited	J. J. Webster	do.	xii.
Engines, &c., for Water Supply	Hants County Asylum...	R. J. Hildred	Aug. 22nd	xii.
Erection of House....	Gloucester County Asy.	*Official*	Aug. 24th	ii.
Wrought-Iron Fire Guards	Met. Asylums Board ...	do.	Aug. 26th	ii.
Venetian Blinds and Fittings....	do.	do.	do.	ii.
Broken Granite, Flints, and Gravel....	Hendon U.R.S.A....	T. Henry....	&c.	xvi.
Toatched Wooden Shelter, Dartford	Met. Asylums Board ...	*Official*	do.	xii.
Public Library, St. Martin's-lane	Com. of Public Libraries	Robt. Walker....	Aug. 27th	xii.
New W.C.'s and Re-Roofing Corridors	Lambeth Guardians....	T. W. Aldwinckle	do.	xii.
Kerbing and Channelling Works	Wandsworth Bd. of Wks	*Official*	do.	xii.
Erection of Schools, &c....	Wivenhoe Sch. Board...	J. W. Start	do.	xii.
Granite Kerb	Croydon Corporation ...	W. Powell	Sept. 3rd	xii.
Repairs to Electric Bells and Wires, &c.	London County Council	*Official*	Sept. 26th	xii.
Making and Burning Bricks	Messrs. Logan & Hemingway....	....	Not stated	xii.
Mission-Room, Haverstock-hill	....	Ewan Christian....	do.	ii.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.	Page.
Borough Surveyor....	Leicester Corporation	700*l.*, &c....	Aug. 17th	xvi.
Surveyor	Stevenage Local Board	40*l.*	Aug. 19th	xvi.
Assistant Inspector of Nuisances....	Wandsworth Bd. of Wks.	2*l.* 10*s.* per week ...	Aug. 26th	xvi.

TENDERS.

[Communications for insertion under this heading must reach us *not later than* 12 *Noon on Thursdays.*]

BRENTFORD.—For 1,800 yards of Guernsey granite, delivered on wharf, for the Brentford Local Board. Mr. J. E. Strachan, surveyor:—

	s.	d.	
S. Hudson, Crouch End	16	6	per yard.
R. L. & J. Pennings, London-bridge	15	3	,,
Turner & Sons, Chelsea	15	1	,,
Nowell & Robson, Kensington....	15	1	,,
Manuelle, Leadenhall-street	15	0	,,
Mowlem & Co., Westminster* ...	14	7	,,

* Accepted.

BRENTFORD.—For 800 yards of Kentish flints, delivered on Wharf, for the Brentford Local Board. Mr. J. E. Strachan, surveyor:—

	s.	d.	
J. Horsford, Faversham	5	2	per yard.
G. Pearce, Brentford (accepted)	4	11	,,

BROMLEY (Kent).—For erecting house at Sundridge-avenue, Bromley, Kent, for Mr. H. S. James. Mr. F. Rogers, architect:—

	£.	s.	d.
Payne	£2,083	0	0
Maides & Harper	2,537	0	0
Bowyer	2,341	0	0
Crossley	2,326	0	0
G. H. Lay (accepted)	2,199	0	0

CARDIFF.—For the erection of public offices, Barry, for the Barry Dock and Railways Company. Messrs. Richards & Gethin, architects. Quantities by architects:—

	£.	s.	d.
J. Allen, Cardiff	£2,643	18	4
C. Shepherd & Son, Cardiff	2,619	0	0
D. J. Davies, Cardiff	2,495	0	0
D. Davies, Cardiff	2,365	0	0
J. Jones, Penarth	2,315	0	0
R. Price, Cardiff	2,275	0	0
W. Bowers & Co., Hereford	2,215	0	0
E. J. Ince, Cadoxton	2,165	0	0
Jones Bros., Cardiff (accepted)	2,113	0	0

CARDIFF.—For making Newland-street, Barry Docks, on the Wenvoe Castle Estate. Messrs. Richards & Gethin, surveyors:—

D. Love, Cadoxton (accepted)	£230	0	0

CARDIFF.—For the erection of summer residence at Barry, on the Romilly Estate, for Captain Murrell. Messrs. Richards & Gethin, architects. Quantities by architects:—

Jones Bros., Cardiff	£1,300	0	0
D. Davies, Cardiff	1,293	0	0
Shepherd & Son, Cardiff	1,233	0	0
D. J. Davies, Cardiff	1,210	0	0
J. Allen, Cardiff	1,121	6	0
W. Bowers & Co., Hereford	1,056	6	0
W. Crisp, Barry (accepted)	1,025	0	0

CARDIFF.—For the erection of offices at Barry Docks, for Messrs. D. A. Thomas, M.P., Riches, & Co. Messrs. Richards & Gethin, architects:—

Shepherd & Son, Cardiff	£261	0	0
R. Price, Cardiff (accepted)	247	0	0

CARDIFF.—For making Lombord and Regent streets, Barry Docks, for the Holton Barry Syndicate. Messrs. Richards & Gethin, surveyors. Quantities by the surveyors:—

W. Crisp, Barry	£570	0	0
D. Love, Cadoxton	489	0	0
J. Barstow, Cadoxton	461	11	4
W. Adamson, Cadoxton	441	0	0
E. J. Ince, Cadoxton	399	0	0
J. Brock, Cadoxton (accepted)	300	0	0

CHISWICK.—For repairs, decorations, and alterations at Nos. 54, 55, 56, 57, 58, 59, and 60, Upham Park-road, Chiswick, for Messrs. Woodbridge & Sons. Mr. S. Woodbridge, jun., surveyor, 210, High-street, Brentford:—

F. Hewett	£343	7	0
H. J. Robinson, Brentford (accepted)	288	3	0

FOREST GATE.—For the erection of a shop at Upton Lane, Forest Gate, E., for Mr. C. Knowler. Mr. J. F. Wesley, architect and surveyor, 276 Romford-road, Forest Gate. Quantities by the architect:—

Baney	£1,870	0	0
J. Holland	1,800	0	0
North Bros.	1,790	0	0
J. W. Wiles	1,701	0	0
W. Watson, Ilford (accepted)	1,700	0	0
W. Parsons	1,684	10	0
Hearle & Sons	1,673	0	0

GREAT YARMOUTH.—For new schools, alterations, &c., for the Great Yarmouth School Board. Messrs. Bottle & Olley, architects:—

New Girls' School, Stradbroke-road Schools, and alterations to Boys' and Infants' Schools.

J. S. Cooper	£2,319	16	0
Jas. Leggett	2,315	10	0
R. Eastoe	2,306	17	0
J. H. Hawes	2,278	3	0
Rand & Cooper	2,275	0	0
Grimble & Watts	2,270	0	0
G. J. Fuller	2,270	0	0
Cork & Beech	2,262	0	0
T. G. Leggett (accepted)	2,240	6	0

[Architect's estimate, £2,260.]

Alterations and Additions to Cobholm Island Board Schools, Infants' Department.

J. H. Hawes	£817	18	0
J. S. Cooper	780	10	0
Jas. Leggett	778	10	0
Grimble & Watts	772	10	0
Rand & Cooper	765	0	0
R. Eastoe	760	8	0
Cork & Beech	747	10	0
G. Beckett	726	0	0
J. Batchelor	718	0	0
J. Harman (accepted)	695	0	0

[Architect's estimate, £900.]

Addition to St. George's Board Schools, Infant's Department.

M. Barnard	£416	0	0
J. H. Hawes	365	5	0
J. Harman	316	16	0
J. S. Cooper	297	0	0
Grimble & Watts	282	0	0
J. Leggett	275	0	0
R. Eastoe	272	6	0
Rand & Cooper	272	5	0
Cork & Beech (accepted)	263	0	0

Architect's estimate, £280.

ILFORD (Essex).—For additions to hospital chapel of SS. Mary and Thomas the Martyr, at Ilford. Mr. J. Martin Brooks, architect, 35, Wellington-street, Strand. Quantities by Mr. John Young, 3, Great Winchester-street, E.C.:—

W. Watson, Ilford (accepted)	£1,737	0	0

[There were five other tenders.]

IPSWICH.—For the erection of a residence at Ipswich, for Mr. W. Booth. Messrs. John S. Corder and Frank Brown, joint architects, 9, Thorofare, Ipswich:—

Catchpole	£1,450	0	0
Bennett	1,410	0	0
Girling	1,375	0	0
Grimwood (accepted)	1,370	0	0

IPSWICH.—For alterations to the "Great White Horse" Hotel, for Mr. M. P. Clark. Mr. John S. Corder, architect, 9, Thorofare, Ipswich:—

Bennett	£127	0	0
Granston	125	0	0
Coe (accepted)	120	0	0

LONDON.—For alterations to Christ Church, Gipsy-hill. Messrs. Giles, Gough, & Trollope, architects:—

H. L. Holloway	£668	0	0
Nightingale	659	0	0
Avias	629	0	0
Jerrard	571	0	0
W. & H. Castle	567	0	0
Bowyer	537	0	0

LONDON.—For new sewers in Chalk Farm-road, Ferdinand-street, Hawley-road, Powlett-place, Hawley-street, and Prince of Wales-road, for the Vestry of St. Pancras:—

J. Neave & Son	£19,999	0	0
J. H. Culverhouse	14,000	0	0
J. Dixon	14,089	0	0
G. Bell	14,800	0	0
J. Mears	13,701	0	0
Bloomfield	13,000	0	0
W. Neave & Son	12,751	0	0
T. Adams	12,598	0	0
R. Ballard	11,750	0	0
C. Killingback (accepted)	11,500	0	0

LONDON.—For the erection of a new branch bank at No. 91, Mile End-road, for the Central Bank of London, Limited. Messrs. Hammack & Lambert, architects, 59, Bishopsgate-street-within, E.C.:—

Higgs & Hill	£5,240	0	0
Thomas Boyce	4,896	0	0
Charles Cox	4,838	0	0
F. & F. J. Wood	4,800	0	0
Drew & Cadman	4,760	0	0
W. Brass & Son	4,653	0	0
Holloway Bros.	4,483	0	0
J. Hearle & Son (accepted)	4,280	0	0

LONDON.—For sanitary repairs, &c., at the Infirmary, Princes-street, Old Gravel-lane, E., for the Guardians of the Poor of the Parish of St. George-in-the-East. Messrs. Wilson, Son, & Aldwinckle, 3, East India-avenue, Leadenhall-street, E.C., architects:—

Holliday	£1,375		
Staines & Son	1,087		
J. Holland (accepted)	1,079		

LONDON.—For the erection of five dwelling-houses and shops in the Roman-road, North Row, for Messrs. Freund & Co., "they providing part materials." Mr. Charles E. Jackson, architect, 195, Grove-road, E.:—

North Bros.	£3,260	0	0
G. W. Beale	2,663	0	0
Boulter & Lee	2,548	0	0
Coulsell Bros.	2,547	0	0
C. Everard, Lucas Works, Lucas-road, Abbey-lane, Stratford*	2,099	0	0

* Accepted.

LONDON. — For alterations and additions to the "Golden Lion," Dean-street, Soho, for Messrs. Sutton & Carden. Mr. E. E. Niblett, architect:—

Burman & Sons	£1,350	0	0
J. Ivory	1,110	0	0
J. & H. Cocks	1,060	0	0
C. Dearing & Son	1,050	0	0
G. Veale	1,038	0	0

LONDON.—For constructing station at Great Dover-street, Southwark, S.E., for the City of London and Southwark Subway Co., being one of six. Mr. T. Phillips Figgis, A.R.I.B.A., architect. Quantities by Mr. R. C. Gleed:—

Brickell	£1,804	0	0
Wall Bros.	1,854	0	0
Holliday & Greenwood	1,778	0	0
W. Downs	1,773	0	0
J. & J. Greenwood	1,728	0	0
Lawrance & Sons	1,697	0	0
Simpson & Son	1,679	0	0

LONDON.—For alterations and additions to 106 and 108, Regent-street, W., for the London Stereoscopic and Photographic Company, Limited. Mr. R. B. Marsh, architect. Messrs. D. Campbell & Son, surveyors:—

Peto Bros.	£4,287	0	0
Mowlem & Co.	4,247	0	0
J. & J. Greenwood	3,986	0	0
Ashby & Horner	3,893	0	0
Lawrance & Sons	3,879	0	0
B. E. Nightingale (accepted)	3,848	0	0

LONDON.—For painting, &c., at the South-Eastern Hospital, for the Metropolitan Asylums Board:—

Welch, Great Dover-street	£1,460	0	0?
Watts & Long, Dulwich	1,400	0	0
Hooper, Wandsworth	1,092	0	0
Stewart & Co., Chapter-road, Walworth	788	8	6
Pullager, Kingsland-road	749	8	8
Gamage, New Cross-road (accepted)	745	0	0?

LONDON.—For the erection of stabling, coachhouse, &c., for Mr. F. Bailey, Addison-road, Kensington, W. Mr. F. Le Rossignol, F.S.I., architect and surveyor, 1, Gresham-buildings, Basinghall-street, E.C.:—

W. H. Lascelles & Co.	£998	0	0
Mark Gentry	990	0	0
Kirk & Randall	989	0	0
E. Lawrance & Sons	970	0	0
Staines & Son	939	0	0
J. Langham, Holloway (accepted)	794	0	0

LONDON.—For additions and alterations to warehouses for the Standard Asbestos Company, Lion Wharf, Bankside, Southwark. Mr. F. Harger, architect, 20, Budge-row, E.C.:—

A. B. Clarke (accepted)	£500	0	0

LONDON.—For repairs and alterations to premises, Nos. 209, 210, Blackfriars-road, and No. 59, George-street, Blackfriars-road, S.E. Mr. J. T. Alexander, architect:—

Rider & Son	£273	0	0
Hoare & Son	249	0	0
A. B. Clarke	247	0	0

LONDON.—For general dilapidations to house, Tudor-place, Tottenham Court-road, W. Mr. R. Reid, architect, 51, Great Marlborough-street, W.:—

A. B. Clarke	£1,215	0	0
Clark & Masseck	1,190	0	0
Hoare & Son	1,123	0	0

LONDON.—For reinstating house and premises at 647, Rotherhithe-street, for Mr. Thomas White. Mr. W. I. Smith, architect, Victoria-street, E.C.:—

Stewart & Co., Chapter-road, Walworth (accepted)	£473	15	0

LONDON.—For providing and fixing a plain slate public urinal at Sermon-lane, near Liverpool-road, for the Vestry of St. Mary, Islington. Mr. Charles Higgins, surveyor:—

Doulton & Co.	£115	0	0
B. Finch & Co.	99	0	0
George Jennings (accepted)	79	0	0

LONDON.—For alterations to the "Queen's Head" public-house, Little Pulteney-street, W., for Mr. G. A. Young. Mr. T. H. Smith, architect, 17 and 18, Basinghall-street, E.C.:—

C. F. Hewlitt	£500	0	0
Allen & Sons	494	4	0
Turtle & Appleton	465	0	0
W. H. Smith	459	0	0
A. W. Hammond (accepted)	417	0	0

For Counter and Pewterers' Work.

Sanders & Son	£90	0	0
Buckley & Beach (accepted)	85	0	0

For Gas Fittings.

C. J. Davis	£76	15	0
Vaughan & Brown	70	0	0
Buckley & Beach	62	5	0

LONDON.—For painting and decorating, &c., the interior of Fleet-road Schools, for the School Board of London. Mr. T. J. Bailey, architect:—

Seeley	£455	0	0
Williams & Sons	408	0	0
Blade	375	0	0
R. & H. Thorpe	347	0	0
Marchant, Lady Somerset-road	321	0	0

LONDON.—For painting and decorating the interior of the Burghley-road School, for the School Board of London. Mr. T. J. Bailey, architect:—

Williams & Sons	£528	0	0
G. H. Seeley	510	0	0
H. G. Marchant (accepted)	470	0	0

LONDON.—For painting and decorating the exterior and interior of the Great College-street Schools, for the School Board of London. Mr. T. J. Bailey, architect:—

Hornett	£372	0	0
Foxley	307	0	0
Stephens	283	0	0
Marchant	243	0	0
Flaxman	233	0	0

LONDON.—For cleansing, painting, and redecorating interior and exterior of the Parmiter's Schools, Approach-road, Victoria-park, for the Governors of the Parmiter's Charity. Mr. F. J. Smith, architect:—

J. Ivory	£345	0	0
A. Hood	323	0	0
F. & F. J. Wood	310	10	0
Thomerson & Son (accepted)	308	0	0

LONDON.—For alterations and decorations at Nos. 5 and 7, Southampton-row, W.C., for Mr. J. Brauner. Messrs. Tinker & Morswood, architects and surveyors, 4, New Inn Chambers, Wych-street, Strand, W.C.:—

	Alterations.	Decorations.
Heath, Brompton	£310	£90
John Jones, Chelsea	269	73
Banks, Bloomsbury	197	54

LONDON.—For repairs, cleaning, painting, &c. at Oldfield-road Schools, Stoke Newington, for the School Board for London. Mr. T. J. Bailey, architect:—

Barley Bros.	£169	10	0
Skitter & Son	161	15	0
H. Knight & Son	117	0	0
J. Coldwells & Son	115	0	0
J. W. Nottingham	110	0	0
J. Grover & Son (accepted)	110	0	0

LONDON.—For the erection of new offices and engine-room, and other works connected therewith, for the Mining and General Electric Lamp Company, Limited, 64, Millbank-street, Westminster. Mr. James Norris, surveyor:—

F. A. Ansar & Son, 1, Wood-street, Westminster (accepted)	£185	0	0

LONDON.—For alterations for the Home and Colonial Trading Association, Limited, at the premises named. Mr. Robert Willey, architect:—

303, *Mare-street, Hackney.*

Nightingale	£340	0	0
Hayward	310	0	0
Rowe	298	0	0

241, *High-street, Camden-town.*

Nightingale	320	0	0
Rowe	306	0	0
Smith	270	0	0

113, *Whitechapel-road.*

Good	297	0	0
Down	248	0	0
Nightingale	237	0	0

LONDON.—For decorative repairs to No. 15, Pemberton-road, Holloway, N. Mr. Edmund J. Harrison, architect, 72, Chancery-lane, W.C.:—

J. H. Farnley (accepted)	£145	0	0

LONDON. — For painting and re-instating thirteen houses at Adelaide-square, Shepperton-road, Islington, N., for Mr. F. C. Nicholas. Mr. Edmund J. Harrison, architect, 72, Chancery-lane, W.C.:—

Stevens Bros., Holloway	£695	0	0
C. Dearing & Son	690	0	0
Wm. Styles, Islington	655	0	0
H. S. Stephens, Islington (accepted)	586	10	0

LONDON. — For painting, decorating, and general repairs at the Surrey Commercial Dock Tavern, for Mr. C. G. Dilley:—

Stewart & Co., Chapter-road, Walworth (accepted)	£138	10	0

NOTTINGHAM.—For supplying Ingle-nook fittings and mantelpieces at Mapperley Hall, for Colonel Wright. Mr. J. A. Stonehouse, architect:—

C. Hindley & Sons (accepted)	£213	0	0

PENARTH.—For the erection of stable, Penarth, for Major Thornley. Messrs. Richards & Gothin, architects:

T. Bevan, Penarth	£195	0	0
Jones Bros., Cardiff	191	0	0
R. Price, Cardiff	176	0	0
T. Griffiths, Penarth	168	0	0
J. Jones, Penarth	150	0	0
G. Griffiths, Cardiff	135	5	0
Shopton & Son, Cardiff	125	0	0
Shepherd & Son, Cardiff	124	0	0
H. Tape, Penarth (accepted)	94	0	0

PENARTH.—For the erection of cow-houses at Erwr Delyn, near Penarth, for Mr. T. R. Thompson. Messrs. Richards & Gothin, architects:—

G. Griffiths, Cardiff	£227	0	0
R. Price, Cardiff (accepted)	210	0	0

RHINEFIELD.—For completing the carcase, and partially finishing a mansion (exclusive of stable court) at Rhinefield, near Brockenhurst, Hampshire, for Lieut. Munro, R.N. Messrs. Romaine-Walker & Tanner, architects. Quantities supplied by Messrs. Pryce Cuzner & Leigh, surveyors:—

Dove Bros.	£20,826	0	0
E. Lawrance & Sons	20,475	0	0
Holland & Hannen	20,314	0	0
Trollope & Sons	20,120	0	0
Hall, Beddall, & Co.	19,977	0	0
J. T. Chappell	19,615	0	0
E. Abley	19,300	0	0
Hy. Lovatt	19,300	0	0
Shillitoe & Son	19,275	0	0
Ward, Clarke, & Co.	19,238	0	0
Holloway Bros.	18,513	0	0
J. McWilliam & Son (accepted)	18,390	0	0

SEVENOAKS (Kent).—For the erection of a pair of semi-detached residences, in Vine Court-road, for Mr. J. H. Marchant. Mr. J. W. Brooker, architect, 13, Railway-approach, London Bridge, S.E.:—

Wiltshire	£2,150	0	0
Garratt & Son	1,610	0	0
Kick (accepted)	1,583	0	0

STANSTEAD (Essex).—For building one pair cottages. Mr. W. D. Carée, M.A., architect:—

W. Gladding (accepted)	£440	0	0

[No competition.]

STOCKTON-ON-TEES. — For erecting St. Peter's Church Schools, Stockton-on-Tees. Mr. Eugene E. Clephan, architect. Quantities by architect:—

John Cook	£2,196	0	0
W. C. Atkinson	2,146	2	5
Cragge & Benson	2,113	10	0
John Davison	2,000	0	0
John Perks	1,940	0	0

TUNBRIDGE WELLS.—For erecting and completely finishing a master's house at the Second Grade Boys' School, for the Worshipful Company of Skinners. Mr. R. H. Burnell, surveyor, 32, Bedford-row, W.C. Quantities by W. R. Mallett, Great St. Helens, E.C.:—

Punnett, Tonbridge	£2,840	0	0
Wiltshire, Sevenoaks	2,798	0	0
Peto Bros., London	2,750	0	0
Holloway Bros., Battersea	2,721	0	0
Patman & Fotheringham	2,700	0	0
Strange & Son, Tonbridge Wells	2,608	0	0
Allen & Son, Kilburn	2,600	0	0
Wm. J. Mitchell, Dulwich*	2,565	0	0

* Accepted.

TO CORRESPONDENTS.

W. P. R.—R. W.—J. D. E. (please send address, in order that your drawing may be returned).—E. L.—R. S. S. (it means an advertisement by a necessitous draughtsman, probably).—J. D.—S. E. T.—H. M. (probably you are not acquainted with the condition of things in regard to London property of the class referred to. To any one who is, the idea of calling landlords "an unfortunate class" would appear a kind of grim irony).—M. & M.—"Hornsey School Board" (the correspondent who sends us a statement as to this competition must have a high idea of our simplicity of mind, if he imagines we are going to publish his "fact" with no better voucher than an anonymous letter).—J. H. H. (below our mark).—C. J. & Co. (we cannot insert such lists. Were we to do so, every firm would favour us with excerpts from its "order-book").

All statements of facts, lists of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

We are compelled to decline pointing out books and giving addresses.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

We cannot undertake to return rejected communications.

Letters or communications (beyond mere news-items) which have been duplicated for other journals, are NOT DESIRED.

All communications regarding literary and artistic matters should be addressed to THE EDITOR; all communications relating to advertisements and other exclusively business matters should be addressed to THE PUBLISHER, and not to the Editor.

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Registered Telegraphic Address, "THE BUILDER, LONDON."

THE INDEX and TITLE-PAGE for Volume LVI. (Jan. to June, 1889) were given as a Supplement to our number for July 13.

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DOUGLAS FOURDRINIER, Publisher,
Addressed to No. 46, Catherine-street, W.C.

Advertisements for the current week's issue must reach the Office before THREE o'clock p.m. on THURSDAY, and for the front Page by the same hour on WEDNESDAY.

SPECIAL.—ALTERATIONS IN STANDING ADVERTISEMENTS or ORDERS TO DISCONTINUE same must reach the Office before TEN o'clock on WEDNESDAY mornings.

The Publisher cannot be responsible for DRAWINGS, TESTIMONIALS, &c. left at the Office in reply to Advertisements, and strongly recommends that of the latter COPIES ONLY should be sent.

PERSONS Advertising in "The Builder" may have *Replies addressed to the Office, 46, Catherine-street, Covent Garden, W.C. free of charge.* Letters will be forwarded if addressed envelopes are sent, together with sufficient stamps to cover the postage.

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Deal Dadoes, from 1s. 3d. per ft. super.
Oak Dadoes ,, 1s. 8d. ,,
Walnut Dadoes ,, 1s. 11d. ,,
Oak, 1 inch Parquet Floors, laid and polished, from £7. 10s. a square.
Solid 1-inch Oak, straight boards, laid and polished, at £6. 18s. a square.
Solid ¾-inch Oak Parquet for covering Deal floors, laid and polished, from £5 a square.
Oak Wood Tapestry Dadoes, from 1s. per foot super.
Walnut or Mahogany, from 1s. 3d. per foot. super.
Ditto with Heavy Mouldings, 4d. ft. extra.
Ditto, ditto, with Carved or Painted Panels, prices according to sketches.

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CORSHAM DOWN. | FARLEIGH DOWN.
BOX GROUND. | COMBE DOWN.
WESTWOOD GROUND. | STOKE GROUND.

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